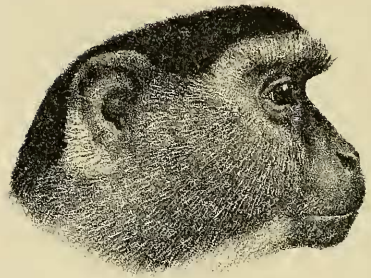
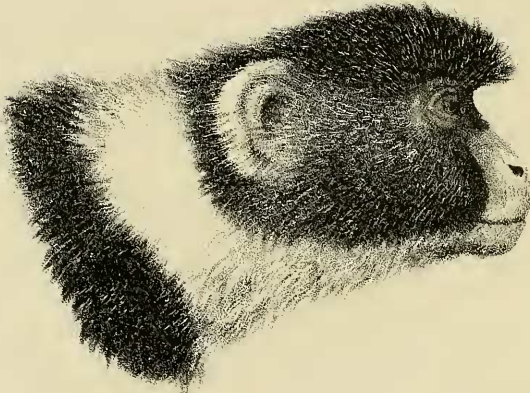


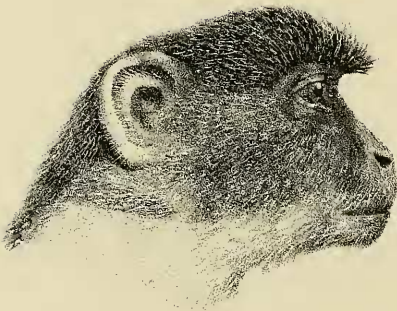
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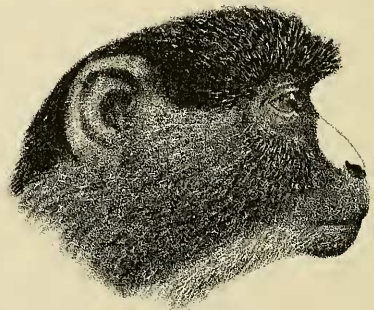
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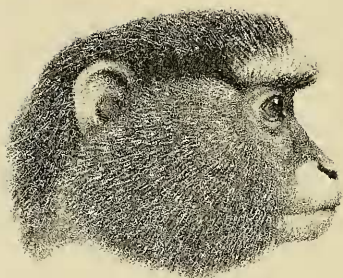
H. Goodchild del. et lith.

Huth imp.

SPECIES OF CERCOPITHECUS.



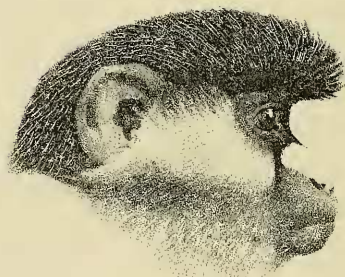
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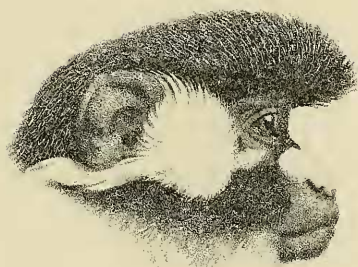
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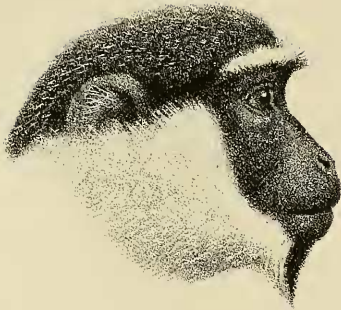


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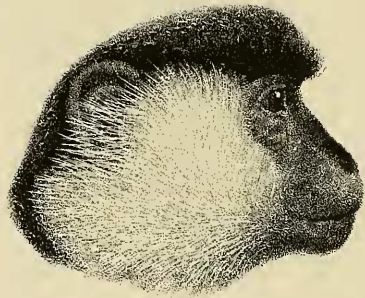
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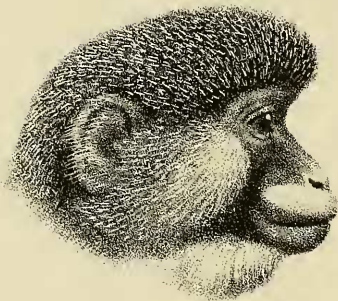
SPECIES OF CERCOPITHECUS



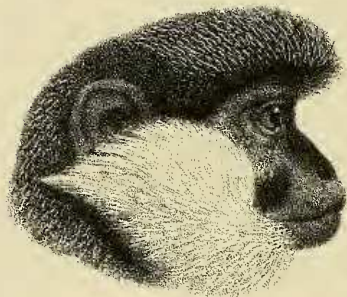
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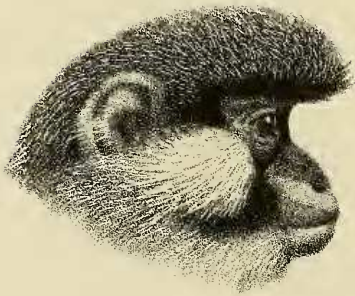
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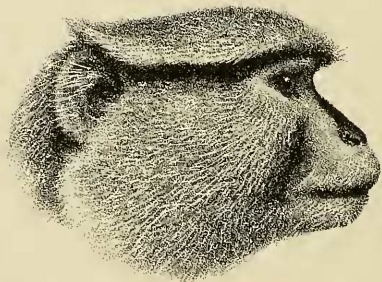
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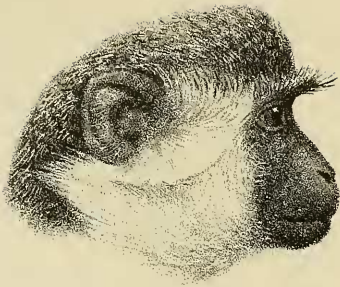
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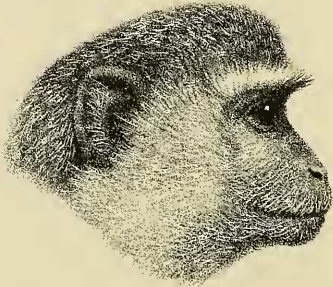
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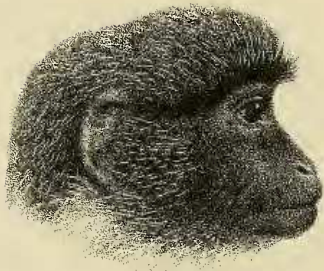
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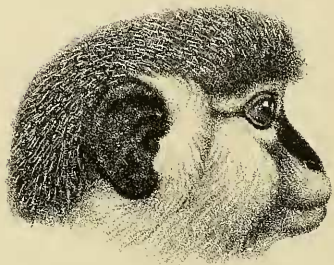
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6.

H. Goodchild del. et lith.

Parker & West imp

SPECIES OF CERCOPITHECUS.

either is to the Puma (*F. concolor*), Lion (*F. leo*) or Tiger (*F. tigris*).* This opinion, obviously suggested by the pattern of the skin, is confirmed by the similarity in voice between the two species. The roar, which is quite unlike that of a Lion or Tiger, may be described as a series of hoarse barking coughs, an interval of about one second separating each expiratory effort. It very much resembles the sound produced by sawing a piece of thin wood with a coarse-toothed saw. In a female Jaguar now in the Gardens the roar is less deep-toned, and its repetition is more rapid than in a female Nepalese Leopard, but whether these differences obtain throughout the species or are merely individual, I do not know. In any case there is no mistaking the fundamental resemblance between the sounds. And I do not think there can be any doubt that the existing Leopards and Jaguars are descended from a common stock which in comparatively recent times ranged sufficiently far to the north to pass from Asia to North America or *vice versa*.

This explanation is in keeping with the greater resemblance, above referred to, that obtains in pattern between Jaguars and North Asiatic Leopards than between Jaguars and African Leopards. And it may be noted that the Leopard which is the least like the Jaguar in pattern is the one that is furthest removed from it geographically, that is to say the form from Grahamstown named *Felis pardus melanotica* by Dr. Günther.

EXPLANATION OF PLATE XXXVIII.

- Fig. 1. *Felis serval senegalensis* Less. Skin of a specimen from Sierra Leone, p. 667.
 Fig. 2. *Felis serval* Schreb. Skin of large spotted form from Uganda, p. 667.
 Fig. 3. *Felis servalina pantasticta*, subsp. nov. Skin of specimen from Uganda, p. 665.
 Fig. 4. *Felis servalina liposticta*, subsp. nov. Skin of type labelled "Mombasa," p. 666.

8. A Monographic Revision of the Monkeys of the Genus *Cercopithecus*. By R. I. POCKOCK, F.L.S., Superintendent of the Gardens.

[Received May 28, 1907.]

(Plates XXXIX.-XLII,†, and Text-figures 179-193.)

INTRODUCTION.

The name *Cercopithecus* was first used in a binominal sense by Erxleben in 1777 for all the long-tailed Monkeys of the Old World known up to that time. Subsequent elimination of some of the species contained in it to form the genera *Colobus*, *Cercocebus*, *Macacus*, and others in the middle and early half of the last century gradually gave to the genus its present significance, and reduced the species referred to it by Erxleben to the following nine:—*diana*, *mona*, *sabæa*, *patas*, *nictitans*, *petaurista*, *talapoin*, *cephus*, and *roloway*.

* I refrain from putting the Ounce (*F. uncia*) in this category, having had very few opportunities of studying this species either alive or dead.

† For explanation of the Plates, see pp. 745-746.

Of these *talapoin* was made the type of a separate genus, *Miopithecus*, by Is. Geoffroy St. H. (C.R. Acad. Sci. xv. p. 720, 1842), and this author legitimately selected as the type of *Cercopithecus* the species named *callitrichus*, which is the same as *sabaeus* of Erxleben (Cat. Méthod. Mamm., Primates, p. 18, 1851).

Since that date the genus *Cercopithecus* has been broken up into a considerable number of named minor groups, notably by Reichenbach and Trouessart. No type species were intentionally indicated by the authors who named these groups or subgenera. One only, namely *Cynocebus*, was based upon a single species. Its type therefore was fixed from the beginning. Moreover, in three others, namely *Mona*, *Petaurista*, and *Diana*, the type was, *ipso facto*, indicated to start with by the adoption for the subgenus of the name of one of the species comprised in it. Of the majority, embracing more than one species, the types have up to the present remained unsettled; and since it is now considered expedient to fix the type species of all genera and subgenera in Zoology, I have attempted to revise the subgenera of *Cercopithecus* for that purpose and have selected a type species for each out of the residuum of species remaining from the process of elimination practised by authors who have preceded me.

The results arrived at are briefly expressed in the following list:—

- CALLITHRIX Reich.¹, 1863 (preoccupied). Type by selection *C. callitrichus* (= *sabaeus* Linn.).
- CERCOPITHECUS Erxl., 1777. Type by selection *C. callitrichus* (= *sabaeus* Linn.).
- CHLOROCEBUS Gray², 1870. Type by selection *C. sabaeus* Linn.
- CYNOCEBUS Gray², 1870. Type ab initio *C. cynosurus* Scop.
- DIADEMIA Reich.¹, 1863. Type by elimination and selection *C. leucampyx* Fisch.
- DIANA Trouess.³, 1897. Type by tautonymy *C. diana* Linn.
- ERYTHROCEBUS Trouess.³, 1897. Type by selection *C. patas* Schreb.
- MIOPITHECUS Geoffr., 1842. Type ab initio *C. talapoin* Schreb.
- MONA Reich.¹, 1863. Type by tautonymy *C. mona* Linn.
- OTOPIITHECUS Trouess.³, 1897. Type by selection *C. pogonias* Benn.
- PETAURISTA Reich.¹, 1863. Type by tautonymy *C. petaurista* Schreb.
- POGONOCEBUS Trouess.⁴, 1906. Type *C. diana* Linn., by substitution of *Pogonocebus* for *Diana* Reich., preoccupied.
- RHINOSTICTUS Trouess.³, 1897. Type *C. petaurista* Schreb., by substitution of *Rhinostictus* for *Petaurista* Reich., preoccupied.

¹ Reichenbach, Die volls. Nat. Affen, pp. 105–122 (1863).

² Gray, Cat. Monkeys B.M. (1870).

³ Trouessart, Cat. Mamm. i. pp. 16–22 (1897).

⁴ Trouessart, Cat. Mamm. Suppl. pp. 10–15 (1906).

The selection by Is. Geoffroy St. H. of *callitrichus* (= *sabæus*) as the type of *Cercopithecus* rendered abortive Gray's action in assigning the name *Cercopithecus* to other species unrelated to *sabæus*. Similarly W. L. Sclater's* selection of *mona* as the type of that genus cannot be entertained, both for the above-given reason and also because *mona* had been eliminated by Reichenbach as the type of his section *Mona*.

Although I have thus endeavoured to show to what sections of the genus *Cercopithecus* the various extant subgeneric names must be applied, I have done so, not because I think the sections have generic or subgeneric value, but simply because the names have been proposed by earlier authors. The application of subgeneric names to these sections is at present, I think, premature, because they rest almost wholly upon colour-characters; and if the system be adopted with consistency, it will be necessary to introduce additional names to emphasize the isolation of certain other species, such as *C. neglectus*, *C. lhoesti*, and possibly *C. nigroviridis*.

The groups, moreover, are of unequal value. The differences, for example, between *C. petaurista* and *C. ascanius* or *C. signatus*, are, I think, of as much importance as those that separate any of the species referred to the three sections combined, named after *nictitans*, *leucampyx*, and *albugularis*—perhaps, indeed, of more importance.

One group, however, stands out from the rest and might perhaps with advantage be given full generic status. This is the group name *Erythrocebus*, typified by *patas*. The living animals differ markedly from other species, not only in colour, but in form. They are slender Monkeys standing high on the legs, the fore legs being particularly long as compared with those of other species, which are heavily built and low on the fore legs. A comparison between them forcibly suggests the differences in aspect between a Chitah and the larger species of *Felis* of about the same size, such as a Puma or a Leopard; and I suspect that *C. patas* is more terrestrial and less arboreal than the other members of the genus *Cercopithecus*.

I regret that lack of proper material has prevented me making use of skull-characters. To work the genus from the craniological standpoint requires a series of skulls of both sexes at various ages of development of each species, so that the extent of the variation in individuals of the same age and of different ages may be ascertained. The material for this is inadequate; and since the measurement and description of such skulls as I have seen would have doubled my work and inordinately added to the length of this paper, without yielding commensurate taxonomic results, I have been compelled to abandon, at all events for the present, all consideration of cranial characters.

One great systematic difficulty that I have had to face, and in

* 'Fauna of S. Africa': Mammals, i. p. 5 (1900). See also Palmer, 'Catalogue of the Genera of Mammalia' (1904).

many cases to leave unsatisfactorily settled, is the decision as to the status, whether specific or subspecific, that should be given to certain forms. This is an extremely difficult point, and one about which probably no two authors will agree. I suspect that most of my present day colleagues will think that I have been too lavish with subspecies, and will consider that the higher rank should have been assigned to them in most cases. Personally, I doubt if in all instances I have gone quite far enough in reducing species to subspecific level. These, however, are relatively unimportant points which future investigation alone can settle.

An interesting phenomenon connected with the coloration of the species of this genus is the frequency of the interchange of the three colours white, red, and black. For example, in *C. erythrogaster* the nose is said to change from black to white during growth. In *C. patas* I have reason to think that the lips, and in some cases the nose, turn from black to white and the limbs from red to white as age advances. In *C. sclateri* the nose-spot is white; in *C. erythrotis* it is red. In *C. burnetti* the belly is white; but in the closely related *C. grayi* it is yellowish red. In *C. petaurista* also it is white, but in *C. erythrogaster* it is red. In *C. kandi* the underside is red; in *C. leucampyx* it is black. In *C. diana* the thighs are rusty-red inside; in *C. roloway* they are white or yellow. In *C. cephus* the tail may be red or coloured like the back. Similar phenomena may be observed in the colour of the hairs on the ear in closely related species; and the brow-band similarly may be black, white, or red.

The material I have had at my disposal has been the skins in the collection of the Society and the examples living in the Gardens during the past four years, most of which were deposited for scientific work of this kind by the Hon. Walter Rothschild. I cannot overestimate the help these specimens have been to me; and my thanks are due to Mr. Rothschild for allowing me to make full use of them. I am also greatly indebted to Sir Ray Lankester and Mr. Oldfield Thomas for lending me the invaluable collection of skins in the British Museum, and especially to Mr. Thomas for giving me the freest possible access at all times to the collection under his charge. Without this privilege and help my undertaking would have been ten times more difficult, perhaps indeed quite impossible.

The two most recent monographs of this genus were those by Dr. P. L. Selater in the 'Proceedings' of this Society for 1893, pp. 243-258, and by Dr. H. O. Forbes in Allen's Nat. Libr., Monkeys, ii. pp. 41-83, 1894. Since that date a considerable number of species have been added, principally by Dr. Matschie, Dr. Neumann, and Mr. Oldfield Thomas. References to the literature relating to these will be found incorporated in the text that follows.

Analytical Key to the Groups of Species.

- a. Prevailing colour nearly brick-red; limbs below elbow and knee white in adult; skin of face and of ears pale flesh-coloured. PATAS-group (p. 712).
- a'. Colour not brick-red; limbs below elbow and knee not white; face and ears never wholly pallid.
- b. Long snow-white uprunning whiskers associated with a blackish or dark red belly.
- c. A white brow-band; markedly white chest and inside of fore limbs; a tuft of hair on the chin and a white stripe on outside of thigh.
DIANA-group (p. 682).
- c'. No white brow-band; chest not wholly white and inside of fore limbs not white; no tuft on chin and no stripe on thigh.
- d. Belly blackish and the same colour as the limbs; top of head blackish, finely speckled, not encircled ... L'HOESTI-group (p. 714).
- d'. Belly and chest red, differing from the limbs in colour; top of head encircled with black and mostly golden green.
ERYTHROGASTER-group (p. 715).
- b'. Whiskers variously coloured, when white and uprunning associated with a white or whitish under side.
- e. A white cordate nasal spot accompanied by a white or greyish-white under side and inside of limbs; under side of tail white and strongly contrasted in tint with the upper side, at least proximally.
PETAURISTA-group (p. 717).
- e'. Nasal spot, when present and subcordate not accompanied by white on the under side of the body and tail and inside of the limbs.
- f. A very distinct patch of yellow or greyish-yellow hair on the cheek defined by a black stripe above and below. CEPHUS-group (p. 721).
- f'. On the cheek no distinct patch of yellow hair defined above and below by a black stripe rising respectively from the brow and upper lip.
- g. Upper and lower lips pink and contrasted with the slate-blue hue of the rest of the face; white, yellow, or red colour of the under side sharply contrasted, especially on the fore limbs, with the black or speckled upper and external areas; (arms almost always black) MOXA-group (p. 708).
- g'. Face not so coloured; colour of underside and of inner side of limbs not so sharply contrasted.
- h. External surface of arms black or darker than back; under side dusky or black.
- i. Summit of head with large red brow-band followed by a jet-black transverse stripe; a white beard, whitish thigh-stripe; two inches at base of tail sharply contrasted with the rest, which is black NEGLECTUS-group (p. 681).
- i'. Summit of head not so coloured; no white beard or thigh-stripe; no sharp contrast in colour at base of tail.
- j. A very conspicuous white patch on the nose.
NICITANS-group (p. 695).
- j'. No conspicuous or isolated white nose-spot.
- k. Black prevailing on head, nape, shoulder, belly, and thighs; when the head is strongly speckled the belly and thighs are black, when the belly and thighs are speckled the head is black, except for the brow-band; (belly rarely red) LEUCAMPYX-group (p. 687).
- k'. Black absent or at least not dominant on the above-mentioned areas; back usually reddish or yellowish.
ALBOGULARIS-group (p. 699).
- h'. External surface of arms not black, sometimes the same colour as the body, usually rather paler and greyer.
- l. Face almost always black, rarely mottled or freckled with pigment; whiskers usually growing upwards and backwards over the ear ETHIOPS-group (p. 725).
- l'. Face particoloured, pallid, with black nose and lips.
TALAPOIN-group (p. 740).

THE DIANA-GROUP.

Pogonocebus Trouess., 1906.

Face black, clothed with black hairs, which spread on to the cheeks, brows, and chin; a narrow white brow-band (diadem) on the forehead behind the superciliary black streak. A longer or shorter tuft of white hairs, forming a beard, on the point of the chin. A black band running from the corner of the eye to the ear. Ears black, scantily clothed with white hairs. Summit of head generally blacker than the body; nape of neck, shoulders, and sides of body dark iron-grey, speckled, the exposed portion of the hair being black with two or three whitish annuli. A rich brownish or blackish-red unspeckled band, broad and posteriorly expanding, extending from behind the shoulder to the root of the tail and sharply demarcated from the surrounding iron-grey tint. The posterior part of the jaw and of the cheek, the sides of the neck and throat, the chest as far back as the mammæ, and the whole of the front of the fore leg halfway between the elbow and the wrist white; the white everywhere, except on the lower arm, sharply defined from the surrounding black or grey. The white hair on the cheek forming uprinning whiskers which partially overlap the ear. The fore leg, except for the white strip above mentioned, black or nearly so both outside and inside. Area of chest behind mammæ and belly jet-black. Outer side of thigh greyish in front, white, yellow, or rufous behind up to the root of the tail; the rest, like the lower leg and foot, black. The black area on the thigh separated from the anterior grey area and from the red of the sacral area by a curving white stripe, which extends forwards and downwards from the upper rim of the ischial callosity. Inner surface of thigh and the whole of the pubic and anal areas white, yellow, or rusty brown. Tail black, with some reddish or grey hairs quite at the base.

Distr. W. Africa: Liberia to Nigeria.

The two known species belonging to this group may be distinguished as follows:—

- | | |
|---|-----------------|
| <i>a.</i> Beard short, not more than an inch long, its basal portion covered to a great extent by black hairs: inner surface and back of thigh up to root of tail bright rusty brown..... | <i>diana.</i> |
| <i>a'.</i> Beard from about two to three inches long, with scarcely any black hairs at the base; inner surface and back of thighs white, lemon- or orange-yellow | <i>roloway.</i> |

I have adopted Dr. Jentink's determination of these two species.

CERCOPITHECUS DIANA Linn. (Plate XLI. fig. 1.)

Simia diana Linn. Syst. Nat. ed. 12, i. p. 38, 1766; Schreber, Säug. i. p. 94, pl. xiv., 1774.

Cercopithecus diana Jentink, Notes Leyden Museum, xx. p. 237, 1898 (nec auct. plurim.).

Cercopithecus diana var. *ignita* Gray, Cat. Monkeys Brit. Mus. p. 22, 1870.

Loc. Liberia.

CERCOPITHECUS ROLOWAY Schreber. (Text-fig. 179.)

Le Roloway ou la Palatine, Buffon, Hist. Nat. Suppl. vii. p. 77 and pl. xx., 1789.

Simia roloway Schreber, Säug. i. p. 109, named on p. 187 and pl. xxv., 1774.

Cercopithecus roloway Erxl. Syst. Regn. Anim. p. 42, 1777; Jentink, Notes Leyden Mus. xx. p. 237, 1898.

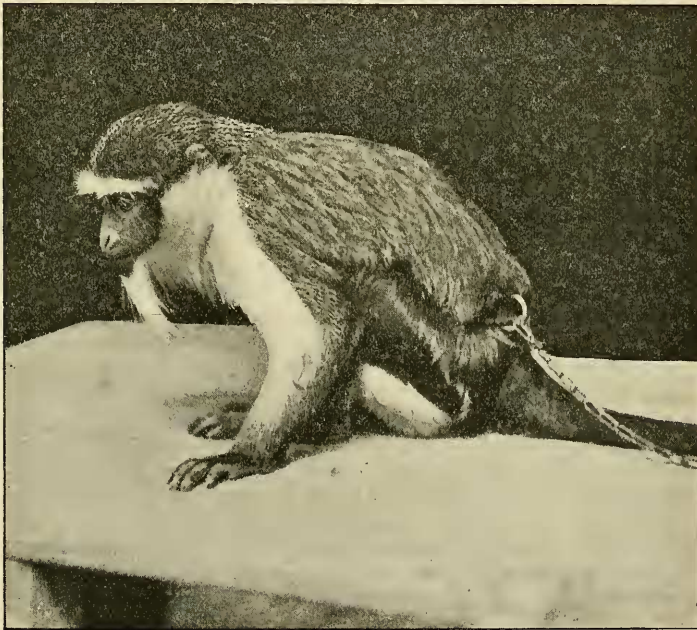
Cercopithecus palatinus Wagner, in Schreb. Säug. Suppl. v. p. 47, 1855.

Cercopithecus diana, auct. plurim., nec Linn.

Loc. Gold Coast and Guinea.

The British Museum has an adult male and female from Fantee (75.4.30.1-2). No exact locality is known for any of the Society's specimens.

Text-fig. 179.

*Cercopithecus roloway* Schreber.

(From a specimen living in the Society's Gardens.)

There is a possibility, though in my opinion it is remote, that the name *roloway* is here used in a wrong sense. In the original diagnosis and figure of this species the belly was described and

represented as white. Both were taken by Buffon from a living specimen. But since Buffon's time no white-bellied Monkey of this group appears to have come to hand, although a very large number of examples have been brought to Europe from Guinea, the country whence the type of *C. roloway* came. The explanation of Buffon's assumed mistake is probably due, I think, to the fact that when one of these Monkeys is seated the white of the inside of the thighs is sometimes continuous with that of the chest and conceals the black of the belly, so that at a casual glance the whole of the under side appears to be white.

If in the future Buffon is proved to have observed correctly in the matter of the whiteness of the belly, the species which here passes as *C. roloway* will require a new name.

It may be added that young examples of *C. roloway* are usually coloured like the adults. Perhaps, however, the thighs get darker with age: or possibly specimens with white, lemon, or reddish thighs represent distinct local races. I have not seen sufficient localised material to determine this point. One young example, now living in the Gardens, had no trace of red on the back when first received, but subsequently acquired it, and differs in no respect now from typical specimens.

THE NEGLECTUS-GROUP.

Cercopithecus barbati Selater (in part.); *Pogonocæbus* Trouess. (in part.).

Prevailing colour of head, cheeks, neck, dorsal surface, and sides of body yellowish grey, speckled with black. Upper part of face blackish, lower part (including tip of nose, upper and lower lips, and chin) clothed with white hair, the skin blue. A mesially interrupted black brow-band. Behind this a large fiery-red diadem broad in the middle and tapering laterally. Behind this a sharply defined jet-black transverse band, narrowest in the middle and expanding at the sides, where it extends backwards to the ears. On the throat a patch of white hairs ending in a point behind on the fore part of the chest and continuous with the white of the chin in front. The hair of this area mesially long, forming a white beard, which is not restricted to the point of the chin. Hairs of the chest short, directed backwards and downwards. Fore leg black externally, at least below the elbow, its radial aspect and area above elbow olive-green, speckled; a black stripe set off by a paler one running obliquely down the upper portion from the shoulder to the radial side of the elbow and continuous with the radial edge of the black of the lower arm. Tail with its basal two inches the same colour as the back; the rest jet-black. Area of rump below the callosities white and continuous with the white of the inner side of thighs and of the pubic area. On the outer side of the thigh a crescentically curved pale stripe runs from the white beneath the callosities and

descends to the knee. Apart from this pale stripe the outer side of the thigh and lower leg is greyish or olive, darker above and over the knee, where the pigmented area is strongly contrasted with the white of the inner side of the thigh; foot and ankle black. Ventral surface from the chest to the pubic area sooty olive-grey.

Distr. Region of Lake Rudolf to the Cameroons and Congo.

Text-fig. 180.



Head of *Cercopithecus neglectus* Schlegel.

(From P. L. Sclater, P. Z. S. 1893, p. 255.)

C. neglectus has hitherto been associated with *C. diana* on account of the presence of a white beard and of a white stripe on the external aspect of the thigh arising from a point near the ischial callosity. The importance of these characters as evidence of affinity is, however, lessened by the fact that *C. mona* has a white patch close to the callosity; that in *C. neglectus* the white stripe in question starts at a point on a level with the lower margin of the callosity, whereas in *C. diana* it arises at its upper margin; that in *C. neglectus* the beard is not an isolated tuft depending from the point of the chin, as in *C. diana* and *C. roloway*, but is formed by the elongation of the hairs covering the inferior edge of the lower jaw and of the throat; and that in *C. diana* the beard is scarcely developed. These differences, taken in conjunction with the dissimilarities in colour, in the direction of the growth of the hairs on the cheek, destroy confidence in the conclusion that they are to be regarded as criteria of kinship close enough to warrant the association of the two species in one section of the genus *Cercopithecus*.

It appears to me that the characters of the one known species point to its being an aberrant type of the *Leucampyx*-group. From these it differs principally in the red colour of the brow-band;

the presence of the black stripe behind it on the head; the backward extension of the throat-patch to form a point on the chest; the length of the hairs on the chin; the presence of the white stripe on the thigh; and the sharp line of demarcation between the speckled base of the tail and the black distal portion.

Text-fig. 181.

*Cercopithecus neglectus* Schlegel.

(From a young specimen from the Cameroons, now living in the Society's Gardens.)

To this section belongs the single species presenting the characters of the section. Its synonymy is as follows:—

CERCOPITHECUS NEGLECTUS Schlegel. (Text-figs. 180, 181.)

Cercopithecus leucocampyx (errore for *leucampyx* Fisch.) Gray, Cat. Monkeys Brit. Mus. p. 22, 1870 (nec *leucampyx* Fischer).

Cercopithecus neglectus Schlegel, Mus. Pays-Bas, vii. p. 70, 1876; and of recent authors.

Cercopithecus brazzae M.-Edwards, Rev. Sci. (3) xii. 1886; P. L. Selater, P. Z. S. 1893, p. 255, and p. 443, pl. xxxiii.*

Loc. Region of the White Nile and Lake Rudolf to the Congo and Cameroons.

The examples of this species that I have seen appear to be

* In this figure the limbs are much too long, the beard is yellow instead of white, and the stripe on the thigh is omitted.

referable to two distinct kinds, which are regarded as subspecies and may be distinguished as follows:—

- a.* Outer side of hind legs down to ankle pale greyish green, speckled, only a little darker than the area above the thigh-stripe and sharply defined from the black of the foot and ankle; a little darker over knee Subsp. *brazziformis*.
a'. Outer side of legs blackish olive, much darker than area above thigh-stripe and not so strongly contrasted with the black of the ankle and foot; a considerable quantity of black over the knee Subsp. *neglectus*.

The type of *C. neglectus brazziformis* is the skin of the Monkey identified by Dr. Sclater as *Cercopithecus brazze* (P. Z. S. 1896, p. 780), which was said to have come from the French Congo. I can find no evidence for this locality. The animal was purchased by the Society from the Gardens in Antwerp, and may therefore have come from Belgian rather than from French territory in W. Africa.

Of what may be regarded as the typical form, the British Museum possesses the imperfect skin obtained by Petherick on the White Nile and referred by Gray with some insight to *C. leucampyx*; a specimen shot by Donaldson Smith on the Omo River, north of Lake Rudolf; a third from the Charada forest in Kafia, 6000 ft., procured by Mr. W. N. Macmillan. From these I cannot distinguish subspecifically a series sent home by Mr. G. L. Bates from the Ja River, Cameroons, and taken near the bank of the river at an altitude of 2000 ft.

The measurements Mr. Bates gives of his specimens are as follows:—

♂.	Head and body	580 mm.,	tail	680 mm.
♀.	" "	470 "	" "	490 "
♀.	" "	485 "	" "	510 "
♀.	" "	500 "	" "	470 "

One of Mr. Bates's specimens differs markedly from the others and from the eastern forms. The dirty white colour of the chest extends past the mammae and spreads on to the inner side of the arm, even below the elbow; most of the hairs on the black band on the head, especially in the middle, have a reddish subapical band; the tail is not jet-black, but tinged with rufous, the pale basal area and the dark portion being much less sharply demarcated.

According to Mr. Bates the native name for this Monkey in the Cameroons is "Avut" or "Fum."

THE LEUCAMPYX-GROUP.

Diademia Reich.

Skin of face slate-blue; upper and lower lips and often the nose clothed with short greyish-white hairs. No pink area on upper and lower lips. Fringe of hair on ears almost always white. No black stripe on brow, temple, or cheek; but frequently a speckled or whitish brow-band when the summit of the

head is black. Cheek-hairs usually speckled grey and black, rarely black, and contrasted with the darker often jet-black colour of the top of the head and nape. Forearm jet-black outside, dark inside, the two surfaces gradually blending in tint; the black of the upper arm frequently continued from shoulder to shoulder. Upper surface and sides of body almost always uniformly speckled greyish yellow and black, the pale annuli in the hairs rarely with a rufous tinge. Tail the same colour above as below, speckled proximally, darker, usually quite black distally. Hind legs black externally or weakly speckled; dark grey internally. Chin and throat grey or white, paler than the chest and belly, which are black or dark grey and almost always darker than the sides of the body. Rarely the whole ventral area red.

Distr. Basin of the Congo; S. Abyssinia; Lake Mweru.

The species of this section differ from those of the Albogularis-section in the absence of the red or yellow tint from the fur of the dorsal area, the predominance of the black pigment in the hairs of the head, shoulders, hind legs, and belly. In *C. stuhlmanni* the belly is scarcely darker than in some of the forms of the Albogularis-section, and the hairs of the hind legs, though nearly black, are annulated. The head and shoulders, however, are jet-black. In *C. opisthostictus*, on the contrary, the head and nape much resemble those of *C. moloneyi*, but the belly and hind legs are black.

This group is also unmistakably nearly allied to the Nictitans-group, through such a form as *C. leucampyx boutourlinii*; and also, I believe, though less closely, to the Neglectus-group.

The material of this group that I have seen is insufficient to establish with certainty the rank that should be assigned to the various forms below recognised. Provisionally I refer them to three species, namely *C. leucampyx*, *C. opisthostictus*, and *C. kandti*; and divide *C. leucampyx* into a considerable number of subspecies. Some of the latter may, however, prove to be worthy of specific status, or to be merely based upon individual variations dependent perhaps on age; while, on the contrary, forms intermediate between *C. opisthostictus* and *C. leucampyx* or between *C. kandti* and *C. leucampyx* may prove that *C. opisthostictus* and *C. kandti* are but subspecies of the earliest described species of the group.

The characters of the three above-mentioned forms, regarded as species, may be tabulated as follows:—

- | | |
|---|-------------------------|
| <i>a.</i> Lower surface, inside of hind legs, and of fore legs at base red; some red close to and upon the base of the tail | <i>kandti</i> . |
| <i>a'</i> . Above-mentioned areas not red. | |
| <i>b.</i> Summit of head and nape of neck thickly speckled with grey and much less markedly darker than the sides of the neck and cheeks; black and pale annuli in the hairs on the body subequal in width | <i>opisthostictus</i> . |
| <i>b'</i> . Summit of head and nape not thickly speckled with grey and therefore much darker than the sides of the neck and cheeks, when the latter are speckled; pale annuli on hairs of body much narrower than the black | <i>leucampyx</i> . |

CERCOPITHECUS LEUCAMPYX Fischer.

Key to the subspecies here recognised:—

- a.* Hairs clothing sides of neck and of cheeks, except close to the face, jet-black, like the top of the head and the shoulders; a sharply defined, mostly white brow-band Subsp. *nigri-genis*.
- a'*. Hairs clothing sides of neck and of cheeks speckled black and yellowish grey.
- b.* A brow-band of speckled or whitish hairs sharply defined from the black of the summit of the head; colour of thighs and of sacral area usually gradually blending.
- c.* Median area of back greenish, turning to a ruddy tinge on the root of the tail; sides of body noticeably paler and greyer than back; tail not distally black Subsp. *doggetti*.
- c'*. Back, sides of body, and root of tail nearly uniformly grey, speckled; tail black distally.
- d.* Area between shoulders covered with nearly jet-black hairs forming with the hairs of the fore legs, nape, and head a continuous black area; hairs on belly distinctly annulated; some grey or white in brow-band.
- e.* Thighs much darker than sacral area and sharply defined therefrom (*teste* Cuvier) Subsp. *leucampyx*.
- e'*. Thighs not sharply defined in colour from the sacral area Subsp. *stuhlmanni*.
- d'*. Area between shoulders grizzled like the rest of the back, but a little darker; belly-hairs dusker, less annulated; brow-band speckled like cheeks Subsp. *carruthersi*.
- b'*. Brow-band much less defined, the summit of the head and the nape of the neck decidedly speckled, though blackish; thighs black and sharply defined from sacral area.
- f.* A conspicuous black patch on temple in front of ear; brow-band largely white Subsp. *pluto*.
- f'*. No conspicuous black patch on temple in front of ear; no white in brow-band Subsp. *boutourlinii*.

Subsp. *LEUCAMPYX* Fisch.

Cercopithecus diana (Le Diane, femelle), F. Cuvier, Hist. Nat. Mamm. i. pl. xvi., 1824.

Cercopithecus leucampyx Fischer; Syn. Mamm. p. 20, 1829 (type *C. diana* ♀ of F. Cuvier).

Cercopithecus diadematus Is. Geoffr. St. H. in Bélang. Voy., Zool. p. 51, 1834 (type *C. diana* ♀, F. Cuv.).

Head, neck, shoulders, arms, legs, and tail black, belly and chest not so dark as the rest. Thighs sharply marked off by colour from the sacral region of body, which, like the entire region behind the shoulders, is grey, ticked black and white. Brow-band conspicuous, white with a tinge of yellow. The whole of the cheek below a line joining the eye and the inferior edge of the ear covered with grey, speckled hairs; the sides of the neck similarly coloured. Lips, chin, and nose covered with short white hairs.

Loc. W. Africa.

I have seen no specimen quite agreeing with Cuvier's description and figure of this species. In drawing up the above-given diagnosis and in placing the subspecies in the analytical key, I have been dependent upon the characters furnished by that author.

Subsp. *STUHLMANNI* Matschie. (Plate XXXIX, fig. 2.)

Cercopithecus stuhlmanni Matschie, SB. Ges. nat. Fr. Berlin, 1893, p. 225.

Cercopithecus otoleucus P. L. Selater, P. Z. S. 1902, vol. i. p. 237, pl. xxv.

Said to resemble *C. leucampyx* in the blackness of the head, the neck, and the anterior limbs, the greyish tint of the upper side, the white frontal band, white lips and chin, and the grey annulated hairs on the whiskers; and to differ from that species in having the greater part of the tail, the inner side of the legs, and the belly coloured like the back, and the outer side of the hind limbs also coloured like the back but darker, and the throat as well as the chin snow-white, and with some longer yellowish-white hairs on the border of the ear.

Length of body 660 mm., of tail 945 mm.

Loc. E. Africa: north of Kinjawanga, a little to the west of Ituri, between Lakes Albert Edward and Albert, 29° 35' E. lat., 0° 25' N. long.; also Kwidjvi Island in Lake Kivu.

In the type of *Cercopithecus otoleucus* now living in the Gardens, the head, nape, area between the shoulders, shoulders, and fore legs are jet-black. The brow-band is grey-white, not snow-white, the hairs of its anterior portion being greyish and speckled like those of the cheek. The hairs of the ears are not white, but faintly tinged with pinkish red. The skin of the face is deep slate, with short whitish hairs on the lips. The throat and chin are white, and there is a dusky patch crossing the fore part of the chest behind the white of the throat. The whole body above is speckled grey and black. The belly also is speckled like the back, but not so thickly, and the thighs externally are speckled and not sharply marked off in colour from the sacral area, the tints of the two gradually blending. The tail is black at its distal end, speckled with grey proximally.

The specimen came from Latuka Mountain in North Uganda (*Delmé Radcliffe*).

Dr. Matschie appears to think that the type of *C. otoleucus* may be distinguished from that of *C. stuhlmanni* by having no white on the chin, and the hind legs and tail black. This is not the case, as the above-given diagnosis shows, and it is highly probable that the two are subspecifically identical.

Dr. Matschie has recently described, under the name *C. neumannii*, some specimens from Kwa Kitoto in North Kavirondo (SB. Ges. nat. Fr. Berlin, 1905, p. 266, pl. x.). This so-called species is said to differ from *C. stuhlmanni* in that the hairs of the brow-band are not grey-white but narrowly banded with dusky grey, and the hairs on the ears grey and not white; the hind legs also are darker and only slightly speckled, and the belly mouse-grey and speckled instead of olive-grey and speckled.

In the British Museum (Reg. no. 1.8.9.17) there is a skin of a specimen procured by Sir H. H. Johnston at an altitude of 4000 feet in the Mpanga Forest, which appears to differ from the type of *C. otoleucus* only in the absence of greyish-white hairs

in the brow-band. In the continuity and completeness of the jet-black hue of the head, nape, and shoulders it resembles the types of *C. l. otolencus* and *nigrigenis*, and, I presume, also of *C. l. stuhlmanni* and of typical *C. leucampyx*. It leads from the foregoing, which have at least some white in the brow-band, to the two following subspecies, in which no white is therein traceable. Additional specimens may prove this example to be worthy of recognition as a distinct subspecies. The head and body of the Mpanga Forest specimen measure 574 mm. (= 23 inches) and the tail 900 mm. (= 36 inches).

It should be stated that, in the diagnosis of *C. stuhlmanni*, Matschie does not mention the presence of a black bar across the chest, which is present in the example from the Mpanga Forest and also in other specimens of this group of *Cercopithecus*, where the belly and chest are of a greyish hue.

Subsp. *CARRUTHERSI*, nov.

Closely related to *C. l. stuhlmanni*, but distinguishable by the absence of white in the brow-band and the less amount of blackness of the area between the shoulders, which is ticked with grey, being only a little darker than the back and decidedly lighter than the head. The belly also is less speckled with grey, and hence darker.

Loc. Ruwenzori, east side, 10,000 ft. (*D. Carruthers*). Type in Brit. Mus.

There is also a native-prepared skin, apparently of the same subspecies, in the British Museum, ticketed "Uganda (*G. F. Scott Elliot*).” Possibly it also came from Ruwenzori.

Subsp. *DOGGETTI*, nov.

Summit of head, including area round ears, and nape of neck to area between shoulders, where speckling commences, jet-black. Whiskers and brow-band olive-grey ticked with black. Median area of back greenish grey, speckled; sacral region with reddish-brown tinge, but speckled. Sides of body speckled, but greyer than dorsal area. Tail nearly black at the distal end, the rest greyish above and below, speckled only at the base. Fore leg and hands jet-black externally; hind leg from hip blackish grey, speckled; foot quite black. Belly and inside of limbs ashy grey; a dark band crossing the region of the collar-bones. Middle line of throat white, the white narrower than in the type of *C. omensis*. Head and body 487 mm., tail 655 mm. (? imperfect).

Loc. S.W. Ankole, between Lakes Victoria and Albert Edward (*W. Doggett*).

A single female specimen in the collection of the British Museum.

This subspecies is characterised by the rufous speckling at the base of the tail, the extension of the speckling, although indistinct, to the tip of that organ, the yellower hue of the back as compared with the sides, and the greyness of the sides of the body and of the belly.

Subsp. *NIGRIGENIS*, nov. (Plate XXXIX. fig. 1.)

Cercopithecus leucampyx P. L. Sclater, P. Z. S. 1893, p. 253 (nec *C. leucampyx* Fischer).

Brow-band broad in the middle, narrowed laterally, mostly white, its anterior hairs long, annulated, pigmented almost to the base and continuous laterally with the similarly pigmented and annulated hairs of the anterior part of the cheek adjacent to the naked or nearly naked skin of the face. The whole of the summit and back of the head, the nape and sides of the neck, and the shoulders both above and laterally, as well as the area in front of and below the ears and on the greater part of the cheek, jet-black, the black hair on the cheek gradually blending in front with the speckled hair on the anterior part of the cheek adjacent to the face and inferiorly with the greyish-white hair clothing the inter-ranal area and the throat. Upper and lateral portions of body behind shoulders speckled greyish yellow, a little yellower dorsally than laterally; the speckling scarcely extending on to the tail, which, for the greater part of its length above and below, is black. The posterior part of the throat, the chest, and belly black. Limbs, outside and inside, and hands and feet black; back of the thighs and, in the female, the pubic region greyish and obscurely speckled.

Loc. W. Africa.

The type and only known representative of this subspecies is a single female specimen, ticketed "W. Africa," in the Society's collection. This was identified as *C. leucampyx* by Dr. Sclater, who followed Schlegel in thinking *C. pluto* of Gray a synonym of *C. leucampyx*. This specimen differs, however, from the type of *C. leucampyx*, as it does from all the other representatives of this group, in having the sides of the neck and almost the entire cheek jet-black. It further differs from the type of *C. pluto* in having the brow-band sharply defined.

Subsp. *PLUTO* Gray.

Cercopithecus pluto Gray, P. Z. S. 1848, p. 56 (text-fig., p. 57), pl. iii.

Brow-band not sharply defined behind from the colour of the rest of the head, consisting for the most part of white hairs apically annulated. Summit and back of head black, speckled with grey. A black patch on the temple in front of the ear, but the rest of the hairs on the cheek, both close to the face, beneath the ear, and on the sides of the neck, speckled grey and black. Nape of neck and shoulders black, but speckled with grey. Dorsal surface and sides of body paler than shoulders, speckled grey and black. Tail speckled in its basal portion, the greater part of it black. Fore limb jet-black. Hind limb black, slightly speckled but sharply defined by its colour from the sacral area. Belly and chest sooty grey, not speckled.

Loc. Angola.

The type of this species is in the British Museum: No. 50.7.9.2. It formerly lived in the Society's Gardens. There is also in the

British Museum a younger specimen of the same subspecies, not differing in any very striking characters from the type.

By common consent *C. pluto* Gray has of late years been regarded as strictly synonymous with *C. leucampyx* Fischer. The type of *C. pluto*, however, at least differs from that of *C. leucampyx* in having the summit of the head, the nape of the neck, and the shoulders distinctly speckled with grey. Hence the brow-band lacks the definition seen in typical *C. leucampyx* and in *C. leucampyx nigrigenis*, and approaches the condition observable in *C. l. boutourlinii*.

Subsp. *BOUTOURLINII* Gigl. (Text-fig. 182.)

Cercopithecus boutourlinii Giglioli, Zool. Anz. x. p. 510, 1887 ; P. L. Sclater, P. Z. S. 1893, p. 441 ; Forbes, Monkeys, i. p. 69, 1894.

Text-fig. 182.



Cercopithecus leucampyx boutourlinii Giglioli.
(From P. L. Sclater, P. Z. S. 1893, p. 442.)

Cercopithecus albigularis Gigl. Ann. Mus. Genov. (2) vi. p. 8, 1888 (nec Sykes).

Cercopithecus omensis Thos. P. Z. S. 1900, p. 801.

Brow-band not sharply differentiated from summit of head, which, like the nape, although blackish, is speckled with yellowish grey. Anterior hairs of brow-band darker than in *C. l. stuhlmanni*; no black patch of hair in front of the ear. Shoulders black but speckled with grey, at least in the middle line. Dorsal and lateral areas of body speckled greyish yellow, uniformly tinted; tail speckled only at the base, the rest black. Fore legs jet-black; hind legs also jet-black, and sharply defined from the sacral region. Belly jet-black, not speckled. Throat, lips, and chin white, a smudge of black defining the white of the lips. Head and body 600 mm., tail 700 mm.

Loc. Southern Abyssinia to Lake Rudolf.

The above-given description is taken from an adult specimen in the British Museum obtained in the Charada Forest, Kaffa (600 ft. alt.), by Mr. W. N. Macmillan. Giglioli's type also came from Kaffa. Selater records another specimen in the Florence Museum from Abugifar in Grimma, province of Gojam. The type of *C. omensis*, a young animal, was from the Omo River, which flows southwards into the northern extremity of Lake Rudolf.

This form, species or subspecies, is obviously more nearly related to *C. leucampyx* than to *C. albogularis*, with which Giglioli, Selater, and Forbes compared it. This mistake as to its affinities may have misled Thomas into describing the type of *C. omensis* as a new species.

CERCOPITHECUS OPISTHOSTICTUS Selater.

Cercopithecus opisthostictus P. L. Selater, P. Z. S. 1893, p. 725.

Skin of face dark, upper lip scantily clothed with white hairs; lower lip, chin, and throat white. Upper surface of the head and nape greyish black, the black predominating, the two pale annuli on the hairs much narrower than the intervening black spaces; on the anterior part of the forehead, however, the grey predominates, as also on the cheeks and sides of the neck, which are decidedly paler than the crown and nape. Area between shoulders blackish, the grey annuli being very narrow. Shoulders and arms black. Thoracic, lumbar, and sacral regions of body and root of tail speckled, the hairs with four or five grey annuli, which for the most part exceed the black spaces in width. Ventral surface jet-black from the anterior extremity of the chest to the pubic region. Legs black externally from the hip to the foot, grey, but not so grey as the back, internally. Tail greyish in its basal third, becoming gradually blacker, almost its distal two-thirds jet-black. Sometimes, but not always, there is a reddish-brown patch on each side near the root of the tail.

Length from crown of head to root of tail 525 mm., of tail 700 mm.

Loc. Region of Lake Mweru.

I have seen four specimens of this species. The two flat

imperfect skins sent to Dr. Sclater by Vice-Consul (now Sir Alfred Sharpe from Lake Mweru; a third, sent by the same collector, to the British Museum (No. 92.2.6.2), and ticketed "Nyasaland." The fourth and best of the series is also in the British Museum (No. 95.7.12.1); it was sent to that institution by Mr. F. S. Arnot, who procured it in the Kundilungo Mountains, west of Lake Mweru.

The black belly, limbs, and shoulders, the predominance of black on the head, the white chin and throat, and the absence of red from the dorsal area, enforce the inclusion of this species in the *Leucampyx*-group of the genus.

CERCOPITHECUS KANDTI Matschie.

Cercopithecus kandti Matschie, SB. Ges. nat. Fr. Berlin, 1905. p. 264.

Summit of head and nape jet-black; summit of shoulders blackish but speckled. Brow-band and whiskers on cheeks greyish green, speckled. Back from behind shoulders to sacral region speckled greyish green, with reddish-yellow bases to the hairs. A quantity of rusty-red hair on the buttocks both above, below, and at the sides of the tail. Tail rusty red at the base, the red gradually fading posteriorly, the distal portion black and more or less speckled. Fore legs jet-black; hind legs blackish but speckled. Ventral surface, inside of fore legs at the base and of the hind legs rusty red.

Loc. Near Lake Kivu (*Powell Cotton*); north of Lake Kivu (*Matschie*).

The above-given description is taken from two flat native-prepared skins in the British Museum presented by Major Powell Cotton.

This species differs from other members of the *Leucampyx*-group by the rufous tint of the underside and of the area round the base of the tail. It might almost be described as an erythristic form of *C. leucampyx stuhlmanni*.

THE NICITITANS-GROUP.

Rhinostictus Trouess. (in part.).

Closely resembling the *Leucampyx*-group in general coloration, but with the hairs on the nose forming a well-defined large white or yellowish spot, sharply differentiated from the darker-coloured upper and lower lips, and with strongly convex upper border. Distinguished from the *Petaurista*-group by the absence of the black brow-band and of a black stripe crossing the temple from the eye to the ear. No black stripe on the cheeks, which are uniformly speckled greenish black. Head and nape darker than the back, which is blackish speckled with grey, but scarcely yellowish. Tail the same colour above as below, black throughout the greater part of its length. Fore legs black. Belly greyish black and grizzled; throat and sometimes the chest whitish.

Owing to the presence of the nose-spot, the species of this section have been hitherto associated with *C. petaurista* and its allies. It is possible that the two groups are connected through such a form as *C. signatus*, which differs from typical members of the Petaurista-group in the coloration of the cheeks; but *C. nictitans* appears to me to be much more nearly related to the Leucampyx-group, especially to *C. l. boutourlinii*, from which it differs essentially only in the greater definition of the hairs forming the patch upon the nose and their distinctness from those of the upper lip.

As bearing on the views here expressed as to the affinity between *C. nictitans* and *C. leucampyx*, it is significant that Cuvier called attention to the similarity between his Diane femelle, the type of *C. leucampyx*, and the Hocheur (*C. nictitans*).

Distr. Liberia through Nigeria to the Congo and Gaboon.

The two species referred to this group may be briefly distinguished as follows:—

- | | | |
|-----|---|--------------------|
| a. | Breast, belly, and base of fore legs on the inner side blackish; no red on ischio-pubic area | <i>nictitans</i> . |
| a'. | Breast and inner side of arms at base whitish; some red hairs on ischio-pubic region and on base of tail, at least in adult | <i>martini</i> . |

The differences between these two species are not very marked. I have not, however, seen any intermediates to justify me in regarding them merely as subspecific forms. Of the two, *C. nictitans* is much more commonly imported, and may usually be seen in menageries.

CERCOPITHECUS NICTITANS Linn. (Text-fig. 183.)

Subsp. NICTITANS (Linn.).

Simia nictitans Linn. Syst. Nat. i. p. 40, 1766.

Cercopithecus nictitans Erxl. Syst. Regn. Anim. p. 35, 1777, and of subsequent authors.

Entire dorsal area from forehead to root of tail thickly speckled with yellowish grey; hairs blacker in front of and behind ears and sometimes slightly so on nape. Arms and shoulders black; legs blackish but speckled. Tail mostly black, speckled at base, without red hairs beneath. Hairs on throat and chin greyish, a black band across collar-bones; chest and belly dark grey to blackish, but more or less speckled. No red on ischio-pubic area. Hairs on body with narrow grey annuli.

Loc. From the Cameroons to Cette Cama.

Pousargues records this species from various localities in the French Congo—namely, San Benito, Alima River, Magumba, Banqui, and Cette Cama.

Since the exact locality of *C. nictitans* is unknown, I propose to regard as typical of this species a form represented in the British Museum by examples from the Benito River, in the Congo, collected by Mr. G. L. Bates. They were taken at sea-level from

fifteen to twenty miles from the mouth of the river. These specimens gave the following measurements in the flesh:—

1. ♂.	Head and body	515 mm.,	tail	805 mm.
2. ♀.	" "	530 "	" "	775 "
3. ♀.	" "	535 "	" "	860 "
4. ♀.	" "	535 "	" "	860 "

According to Mr. Bates, the Fang name for this Monkey, known to dealers as the "Hocheur," is "Avem."

Text-fig. 183.



Cercopithecus nictitans Linn.

(From a specimen living in the Society's Gardens.)

Mr. Bates also obtained examples from Efulen in the Bulu Country, Camerouns, 1500 ft. alt. These differ from the Benito River examples in having the hairs on the fore part of the throat and on the posterior part of the abdomen washed with brown. I do not know whether this difference in tint has any systematic value, or whether it is due to artificial staining of the hair during the preparation of the skins. The measurements of two are as follows:—

1. ♀.	Head and body	530 mm.,	tail	800 mm.
2. ♀.	" "	540 "	" "	750 "

Subsp. *LAGLAIZEI*, NOV.

Like the Benito River form, which I regard as typical, but much greyer dorsally, owing to the greater length of the grey as compared with the black annuli on the hairs. In a back hair of *C. nictitans laglaizei*, picked haphazard, measuring 80 mm., the ultimate pale annulus measures 4 mm., the penultimate 5 mm., and the intervening area about 8 mm.; whereas in a hair of *C. nictitans nictitans*, measuring 65 mm., the ultimate pale annulus is 1.5 mm., the penultimate 2 mm., and the intervening area about 8 mm. These differences are fairly constant. In no case do the pale annuli of the typical form nearly reach half the width of the intervening dark annulus.

Loc. Gaboon (*Laglaize coll.*). In B.M., Reg. no. 80.6.7.1.

CERCOPITHECUS MARTINI Waterh. (Plate XXXIX. fig. 5.)

Cercopithecus martini Waterhouse, P. Z. S. 1838, p. 58; 1841, p. 71.

Cercopithecus ludio Gray, P. Z. S. 1849, p. 8, pl. ix. fig. 2.

Cercopithecus stampflii Jentink, Notes Leyden Museum, x. p. 10, 1888.

? *Cercopithecus temmincki* Ogilby, Is. Geoffr. St. H. Dict. Hist. Nat. iii. p. 303, 1845.

Skin of face (dried) black; lips clothed with short whitish hairs; nose-spot large, white; hairs on cheek and sides of neck speckled black and yellowish. Head speckled black and yellow on forehead, the yellow speckling more pronounced than on cheeks; on the crown of the head, the nape of the neck, in front and behind the ears the yellow speckling much less conspicuous, the black largely predominating owing to the disappearance of the distal yellow annuli. Back from behind the shoulder to the root of the tail densely speckled with yellowish grey, which predominates over the black. Arms black externally. Legs darker than back but speckled; hands and feet black. Throat and chest dirty greyish white; the pale area of the throat separated from that of the chest by a faint blackish band; the pale area of the chest extending in a point backwards to the end of the sternum, and spreading on to the base of the arms on the inner side. Belly dark smoky grey, faintly speckled, the colour becoming paler posteriorly and upon the inner side of the thighs. A considerable quantity of rusty-red hair upon the ischio-pubic region. Tail with its basal fourth like the sacral area; some reddish hairs by the anus beneath; the distal three-fourths black.

Loc. Liberia to the Cameroons.

Cercopithecus martini was based upon a native-prepared and imperfect skin, with the face and other parts cut away. It is in the British Museum, and is labelled "Fernando Po." It does not appear to be specifically or subspecifically separable from the form named *C. ludio* by Gray. *Cercopithecus stampflii* was described as distinguishable from *C. nictitans* by having white-coloured underparts, but in the description only the chin, breast,

fore part of the belly, and the upper part of the inside of the fore limbs are said to be white. Examination of a large number of skins may show that Liberian and Nigerian examples are sub-specifically distinct; but as yet there is no evidence of this, so far as I am aware.

The above-given description is taken from the skin of an adult female in the British Museum labelled "Neighbourhood of Cameroon Mountains, 71.7.8.2; purchased of Mr. Cutler." There is also a smaller example in the British Museum from Jebba, on the Niger (*G. F. Abadie*: no. 0.3.29.1), which has the belly paler and the tail more speckled and no red on its base beneath and no red hairs on ischio-pubic region; also three specimens (♀) in the Society's collection labelled "W. Africa," and numbered 11.7.96 to 21.4.1901, 6.3.1900 to 24.1.1901, 3.4.1900 to 15.8.1900, the numbers indicating the date of arrival and death. These have more green in the hair than the wild-killed examples, and the white of the chest extends down the middle line of the belly about as far as the umbilical region, and in neither is there so much red upon the anal area as in the adults.

Recently the Society received as a donation from Captain Rudkin a very young example from Asaba, on the Niger.

There is also in the British Museum a specimen labelled "Delta of the Niger; Dr. Baikie's Coll.; no. 62.7.17.3," which differs from the other examples I have seen in having the nose-spot pale lemon-yellow instead of white and the pale areas of the frontal hairs much redder, the red being particularly noticeable in those just above the eyebrows. The speckling of the belly and back is also less distinct.

Additional examples from this same area may prove these characters to have subspecific value.

THE ALBOGULARIS-GROUP.

Nearly allied to the *Leucampyx*-group, but with much less black pigment in the coat. The head, nape, shoulders, and cheeks very uniformly coloured, as a rule speckled yellowish-grey and black; the head sometimes a little darker, rarely with a red tinge or patches of red. The lumbar and sacral regions of the back more brightly coloured than the shoulders and head, owing to the presence of yellow or red annuli in the hairs, the red or yellow sometimes restricted to the dorsal area, sometimes spread over the sides of the body.

- | | | |
|----|--|----------------------|
| a. | Proximal third of under side of tail nearly white and sharply defined from the iron-grey upper side; dorsal area of body dark iron-grey with scarcely a fringe of yellow | <i>labiatus</i> . |
| a' | Upper and under sides of tail uniformly coloured, or approximately so; some yellow or red in the hair, at least of the lumbo-sacral area of the body. | |
| b. | Some almost wholly red hairs on the head, forming at least a rufous patch above and in front of the ears. | |
| c. | Cheeks strongly suffused with rusty red and markedly contrasted with the blackish-grey tint of the shoulder adjacent to the neck | <i>rufotinctus</i> . |
| c' | Cheeks without any red, approximately of the same speckled yellowish-grey tint as the shoulders | <i>stairsi</i> . |

- b*. No red on the head.
- d*. A conspicuous white collar extending over the sides of the neck on to its dorsal area, its two extremities only separated by a narrow area of iron-grey speckled hair ... *kolbi*.
- d*. Collar less conspicuous; when present, not reaching the dorsal area of the neck.
- e*. Dorsal area of lumbo-sacral region speckled chestnut-red, and sharply contrasted with the speckled stone-grey tint of the sides; summit of head noticeably darker than the shoulders and cheek *moloneyi*.
- e*. Coloured hairs on the body either extending all over the sides, or when restricted to the dorsal surface set off laterally and on the shoulder by very dark speckled hairs; head not darker than shoulders or cheeks.
- f*. Hairs on ear mostly black; black hairs on nose and upper lip; coloured area of back speckled dark rusty brown; prevailing colour smoky grey *preussi*.
- f*. Hairs on ear whitish or red; coloured area of back yellower; no black hairs on nose or lip.
- g*. Hairs on ear decidedly red; coloured area of body restricted to dorsal region *francescæ*.
- g*. Hairs on ear whitish; coloured area extending all over sides *albugularis*.

CERCOPITHECUS ALBUGULARIS Sykes.

Semnopithecus ? albugularis Sykes, P. Z. S. 1831, p. 106.

Cercopithecus albigularis Sykes, P. Z. S. 1832, p. 18.

Cercopithecus erytharchus Peters, Reise Mossamb., Säugeth. p. 1, pl. i., 1852.

♂ ♀ *adult*.—Head, cheeks, and dorsal area between shoulders speckled black and grey, the head only a little darker than the cheeks. Behind the shoulders the grey in the hairs is gradually replaced by yellow, the entire lumbar and sacral regions being uniformly washed with that colour, which spreads also on to the sides of the body and the root of the tail. Arms not wholly black, speckled close to shoulder and along the radial side of forearm. Legs dark ashy grey, thickly speckled: hands and feet quite black. Chin, throat, inner side of upper arms and of legs dirty greyish white. The rest of the ventral surface, which is of a darker grey, practically unspckled in the female. In the male the under side is densely speckled, the inner side of the thighs and pubic area and the throat remaining unspckled. Tail mostly black, speckled with yellow at base, then for a short distance with grey, the rest black. Root of tail and ischio-pubic region in male without red hairs. In the female the root of the tail and the sides of the callosities rusty red. The young of both sexes resembles the female in this respect, and also in having the whole of the under side greyish white and unspckled, but differs from the adults of both sexes in having some almost wholly red hairs upon and close to the root of the tail above and the backs of the thighs faintly tinged with red. In these respects they recall *C. stairsi*.

Loc. Southern Nyasaland: Zomba (*A. Sharpe*); Blantyre (*B. L.*

Selater); Chiradzula (*A. Whyte*); Milanji Plateau, 3500 ft., and Fort Lister, Milanji, 6000 ft.; Manzi, on the E. shore of Lake Shirwa (*A. Sharpe*).

The skins from the above-mentioned localities are in the British Museum and in the Society's Collection.

This form has also been recorded from Cape Corrientes (*Peters*) and from Quilimane and the Lower Zambesi (*Peters & Kirk*).

The adult male and female from which the description has been taken came respectively from Fort Lister, Milanji, and from Chiradzula. I have also seen young females from Milanji and Chiradzula, and a young male from Manzi.

The name *albogularis* or *albigularis* has been applied to Monkeys both from East and West Africa. The type of *C. albogularis*, however, was said to have come from Madagascar. This information fixes with practical certainty some part of East Africa as its origin. In the original description, Sykes speaks of the coloured area of the back as "yellowish ochre"; and since the East-African specimens known to me which best fit this description are those referable to the form named *C. erythrarchus* by Peters, I regard *erythrarchus* as a synonym of *albogularis*. In this I follow Dr. Forbes, who, however, altered the wording of Sykes's description, and described the coloured area of the back as "brownish yellow": from which it may be inferred that the specimens he had before him at the time were not true *C. albogularis*, but were possibly racially identical with the examples described below from the Rufiji River.

Subsp. BEIRENSIS, nov.

Closely allied to the Nyasaland form *C. albogularis albogularis*, the back and sides being speckled with pale yellow. A slight rufous tinge in the hairs on the sacral region; but at the root of the tail above and below, as well as on the adjacent area of the rump, a quantity of bright red hair. The whole of the under side of the body and the inside of the hind legs to the ankle whitish; the back of the thighs whitish tinged with rufous.

Loc. Beira.

Two adult male examples in the British Museum belonging to the Rudd Collection, and shot by Mr. Claud Grant. Measurements in mm. of larger specimen: head and body 561 mm., tail 601; of smaller: head and body 501, tail 658.

These animals, although adult, resemble the young of the Nyasaland form in the paleness of the under side and the presence of the rufous tinge on the rump and the root of the tail. In these respects they differ from the adult of the Nyasaland form *C. a. albogularis*.

The type of this subspecies is remarkably like that of *C. stairsi mossambicus*, practically the only difference between them being the absence of red on the head of *C. a. beirensis*.

Subsp. *RUFILATUS*, NOV.

? *Cercopithecus monoides* Is. Geoffr. St. H. Arch. Mus. ii. p. 551, pl. xxxi., 1841.

Closely resembling the Nyasaland form, but with the back and sides behind the shoulders speckled a rich reddish orange-yellow. Head and neck somewhat thickly speckled with black. No distinct whitish half-collar. Belly smoky grey, darker than in the Nyasaland subspecies. Thighs dark grey, speckled and sharply defined from the lumbo-sacral area and the flanks.

Loc. Rufiji River, S. of Zanzibar.

Two specimens in the British Museum, presented by Capt. Wharton, Nos. 78.12.26.1-2. Also a specimen ticketed "Kima, from the coast up to 9000 ft." (*Carlisle Fraser*, 97.2.14.4); and a third ticketed "Zanzibar Island (*J. T. Last*, 06.6.5.6)," which is not so richly coloured as the Rufiji and Kima examples.

Subsp. *ALBOTORQUATUS* Pous. (Plate XXXIX. fig. 4.)

Cercopithecus albоторquatus Pousargues, Bull. Mus. Paris, ii. p. 56, 1896; O. Neumann, P. Z. S. 1902, vol. ii. p. 144 (wrongly assigned to Thomas).

Head, nape, shoulders, and cheeks almost down to corners of mouth practically uniformly speckled with yellowish grey and black, the cheeks a little greyer than the head. Throat, sides of neck, and anterior part of chest a little beyond the mammae snow-white and sharply contrasted with the grey of the cheek and the blackish grey of the shoulders. The white on the sides of the neck forms a more definite half-collar than in typical *C. albogularis*, but it does not extend on to the nape or summit of the neck as in *C. kolbi*. Area from behind shoulders to root of tail speckled with yellow, which spreads over the sides of the body. Tail yellow-speckled at the base above for about two inches, becoming gradually rufous laterally and inferiorly; the rest of the tail dark, indistinctly speckled, the grey speckling gradually dying away posteriorly; the end black. Inside of fore leg at base ashy grey, becoming sooty grey towards the wrist. Outer side of thighs smoky grey, speckled; inside of thighs much paler grey, whiter at base, where they join the pubic region; back of thighs greyish white tinged with pale reddish; a considerable quantity of rusty-red hair on the area at the root of the tail above and outside the callosities. Ventral surface from behind the mammae ashy grey, unspckled; hairs of pubic region white.

Loc. ? W. Africa.

The above-given description is taken from a single female specimen that formerly lived in the Society's Gardens. It was identified by Mr. Sclater as *C. albogularis*.

In nearly all respects it agrees with the description of *C. albоторquatus* published by Pousargues, especially with respect to the colour at the root of the tail, on the back of the thighs, and the collar on the sides of the neck. It must be noticed, however, that

Pousargues says "*genis albis*" (cheeks white); but since there is no member of the *Albogularis*-group which has the cheeks, in the English acceptation of that term, white, one must conclude that Pousargues was referring to the area of the jaw behind the corner of the mouth. He could not have failed to notice so striking a difference between *C. albotorquatus* and *C. albogularis*, had the area of the face below a line from the corner of the eye to the ear been white in the type that received the former name.

CERCOPITHECUS KOLBI Neum.

Subsp. *KOLBI* Neum.

Cercopithecus kolbi O. Neumann, P. Z. S. 1902, vol. ii. p. 144.

Closely related to *C. albogularis*, of which it may prove to be a subspecies, but distinguishable by the greater distinctness of the white collar and its extension over each side of the neck on to the nape, so that a space of about two inches or less of speckled hair in the middle line separates the two ends. The colour of the dorsal side much resembles that of *C. albogularis rufilatus*. Hairs on the ears long and whitish or greyish.

Loc. Kedong escarpment (*C. S. Betton*, type no. 0.1.3.1 in B.M.).

The British Museum also has examples from Mt. Kenia, 8000–9000 ft. (*A. H. Neumann*), Roromo (*Lord Delamere*), and the Nairobi Forest (*C. S. Mackinder*); and there is one in the Society's collection ticketed "Uganda," which belongs to the typical or to a nearly related form.

According to O. Neumann, *C. kolbi* differs from *C. albotorquatus* Pous. by its longer fur, owing probably to its being a mountain form, by the presence of the white fringe on the ears, by the absence of red on the anal region and base of tail, and of the reddish tinge on the hind legs, and finally by the less sharp definition between the dark and white areas on the neck.

Mr. Neumann does not state whether he has seen the type of *C. albotorquatus*, or whether he differentiated *C. kolbi* by the description only. The specimens of *C. kolbi* examined by Neumann show considerable variation in the distinctness of the white collar. Again, although the skin of the pubic region is cut away, there is a considerable quantity of brownish-red hair at the sides of the ischial callosities, both in the specimen collected by Mr. Betton on the Kedong escarpment and in the one from Roromo. In the examples from Nairobi, which are altogether less well-coloured, the red hair on the anal region is not so conspicuous. Perhaps more than one subspecies is here involved.

Subsp. *HINDEI*, nov. (Plate XXXIX. fig. 3.)

Differs from typical *C. kolbi* in the following particulars:—

Nose and upper lip clothed with a more distinct short coating of greyish hairs. Hairs on cheeks and head with a very decided reddish-yellow not greyish-yellow tinge. Ear-tufts not uniformly

yellowish white, but distinctly yellowish and banded. Collar neither so white nor so sharply defined, on the chest blending gradually with the tint of that area. Coat long and thick; lumbar and sacral regions with a very decided brownish-red or rusty-red tinge, which extends also on to the root of the tail above and below, and thence round the ischial callosities. Sides of body speckled with yellow, not with grey. Ventral surface a fairly uniform ashy grey, very indistinctly speckled. Outside of legs not so dark, less speckled, the speckling with a yellowish tinge.

Loc. Tutha, in the Kenia district, 8000 ft. alt.

A single male example, collected by Dr. S. L. Hinde in Dec. 1902 (B.M., Reg. no. 3.5.25.1).

CERCOPITHECUS MOLONEYI Sclater.

Cercopithecus moloneyi P. L. Sclater, P. Z. S. 1893, p. 252, pl. xvii.

Summit of head blackish, speckled with yellow, much darker than the cheeks, which are speckled with greyish yellow; a considerable amount of white in the hairs above the brow. Area between shoulders speckled with greyish yellow. Posterior portion of back and lumbo-sacral region a rich ruddy chestnut-brown, which is somewhat sharply contrasted with the speckled grey tint of the sides of the body and the thighs. Arms wholly black, except the inner side of the upper arm, which is greyish and sometimes speckled; black of upper arm extending up as a narrow stripe in front of shoulder. Legs grey, speckled. Hands and feet black. Throat and chin dirty greyish white. Ventral surface dark grey, more or less speckled. Tail mostly black, speckled towards base, with some reddish hairs above on the root. No red on underside of root of tail nor on ischial area in male; a considerable amount in the female in these places.

Loc. North Nyasaland: between Lakes Tanganyika and Nyasa (*Sir J. A. Moloney*); Nyasa-Tanganyika plateau (*J. B. Yule*). Top of Masuku plateau (*A. Whyte*).

CERCOPITHECUS STAIRSI Sclater.

Cercopithecus stairsi P. L. Sclater, P. Z. S. 1893, pp. 252 & 443, also 1902, p. 580, pl. xl.; Forbes, *Monkeys*, ii. p. 73, 1894 (in part., ♀).

Subsp. STAIRSI Sclater.

♂ (*subadult*).—Face blackish, lips scantily clothed with white hairs; summit of head speckled yellowish green in front and mesially, reddish at the sides; above and in front of the ears there is a ferruginous patch extending down as far as the corner of the orbit and composed of hairs that have lost their black annuli; posteriorly the reddish tint covers the occipital area as far down as the level of the lobe of the ear. Hairs on brow-ridge longer, with three yellowish annuli. Cheeks speckled yellowish green. Sides

and nape of neck much the same colour as the cheeks. Shoulders rather greyer than neck. Area between shoulders speckled yellow and black, with faint reddish tinge. Posteriorly in the middle line the reddish tinge on the hairs increases in intensity and extent, and on the sacral region the black annuli have entirely faded away. Sides of body yellower than dorsal area, with some red hairs behind root of arm. Arms blackish and speckled with grey externally, greyish white internally. Legs pale red externally, the hairs not annulated; greyish white faintly tinged with red internally; feet grey above. Throat, lower side of neck, chest, and belly greyish white, with a faint tinge of red on the belly. Hairs round callosities on back of thighs reddish. Tail red like sacral region for three or four inches of its length above and for a shorter distance below; posteriorly the red gradually dies away, and is replaced distally by greyish black and black.

The above-given description is taken from the skin of a male from the Lower Zambesi that lived in the Society's Gardens from Dec. 14th, 1900, until Dec. 3rd, 1901.

There is also a second male specimen, younger than the latter but exactly like it in colouring. Both agree very closely with the typical female example from Chindi described and figured by Dr. Sclater and now preserved in the British Museum.

Subsp. *MOSSAMBICUS*, nov.

Cercopithecus stairsi P. L. Sclater, P. Z. S. 1893, p. 612; Forbes, *Monkeys*, ii. p. 73, 1894 (in part., ♂).

Distinguishable from the typical form by the red on the head being restricted to a relatively small rufous patch above and in front of the ear, scarcely any red being traceable behind the ears or on the occipital area. The dorsal area is very faintly tinged with red and the sides are grizzled like the nape of the neck, without any of the rich orange-yellow noticeable in the typical form. Only close to the root of the tail above and laterally are the hairs quite red and devoid of annuli. Lastly, the outsides of the thighs are speckled with grey and black, like the sides of the body, and without any tinge of red; the backs of the thighs, however, are pale reddish and unspeckled. Only about three inches of the root of the tail are red, and the transition from the red to the greyish black is much more abrupt than in *C. stairsi stairsi*.

Loc. Mozambique.

A single male specimen received from Mr. Hintz by the Society on June 7th, 1893. There is no evidence, let alone proof, that the differences in colour between this specimen and the typical form are attributable to age or individual variation. The two may be distinguished as follows:—

- a.* Red on head extending behind ears and on to occipital area; sides of the body washed with yellowish red, outer surface of posterior limbs reddish, unspeckled Subsp. *stairsi*.
a'. Red on head practically limited to a pair of patches in front of the ears; sides of body and external surface of posterior limbs speckled grey Subsp. *mossambicus*.

CERCOPITHECUS RUFOTINCTUS, sp. n.

Cercopithecus stairsi P. L. Sclater, P. Z. S. 1896, p. 609.

♀. Distinguishable from *C. stairsi* by having a reddish tint generally diffused over the upper portion of the head, without distinct definition of the preaural patches; also in having the cheeks and the long hairs which grow backwards over the sides of the neck beneath the ears decidedly washed with red—in fact, differing but little from the top of the head but very strongly from the shoulders in colour. The dorsal area and the sides of the body are much redder than in the type of *C. stairsi mossambicus*. In this respect the specimen approaches the male of *C. stairsi stairsi* but the hairs are distinctly annulated down to the root of the tail. The shoulders and arms are blacker than in the other specimens, and the outer sides of the legs are grizzly black, as in *C. stairsi mossambicus*, but darker, and not reddish yellow as in *C. stairsi stairsi*.

Loc. British East Africa (? Mombasa).

A single female specimen was presented to the Society by Mr. J. W. W. Pigott on Sept. 20th, 1895.

This form should perhaps take rank only as a subspecies of *C. stairsi*. The type, however, differs more from the types of the two subspecies of *C. stairsi* than they do from each other.

CERCOPITHECUS FRANCESCÆ THOS.

Cercopithecus francescæ Thomas, Ann. Mag. Nat. Hist. (7) x. p. 243, 1902.

Coat long and thick. Prevailing colour of head, shoulders, and sides of body blackish, speckled with grey, the black predominating. Over a definite area of the back from well behind the shoulders to the root of the tail, the speckling is distinctly yellow, but the yellow does not spread on to the sides of the body nor on to the thighs, the blackish colour of which passes gradually into the more distinctly speckled tint of the sides of the body. Ventral surface, inside of thighs, and chest sooty or smoke-grey. Throat and sides of neck up to the level of the lower edge of the ear whitish. Hair on ears with a more decided reddish tinge than is seen in any species of this section.

Loc. Near the Mount Waller plateau, Lake Nyasa. Reg. no. in B.M. 2.7.24.1.

A much smaller Monkey than *C. albogularis*, with reddish hair on the ears and the yellow speckling in the fur confined to the dorsal area of the posterior half of the body.

CERCOPITHECUS PREUSSI Matschie.

Cercopithecus preussi Matschie, SB. Ges. nat. Fr. Berlin, 1898, p. 76.

Cercopithecus crossi Forbes, Nature, vol. lxxii. p. 630, 1905.

Head, neck, shoulders, and sides of body blackish, speckled with grey, no yellow in the hair of the whiskers or head. The dorsal

area of the body between the shoulders and the root of the tail black, speckled with reddish brown, the reddish annuli in the hair much narrower than the black. Tail speckled reddish at the root, the terminal half black, the intervening area dark but speckled with grey. External surface of thighs blackish, speckled, passing gradually into the darker hue of the sides of the body, the hairs of which, at all events inferiorly, have no red in the grey speckling. Ventral surface dark smoke-grey, sometimes with indistinct speckling. Throat and sides of neck up to the level of the lower border of the ear whitish grey. Between the eyes a line of black hair which expands on the nose into a triangular black patch and extends thence inferiorly over the upper lip. The whisker-hairs adjacent to the face greyish at the base. Hair on ears mostly black.

Loc. Cameroons (*Matschie and Forbes*); also Fernando Po, in B.M. reg. nos. 4.7.1.5-7.

A young specimen in the British Museum gives the following measurements:—Head and body 262 mm., tail 315 mm.

A much darker form than *C. albogularis*, with the rufous speckling of the back not extending so far inferiorly, and with black hair on the nose, lips, and ears.

CERCOPITHECUS LABIATUS Geoffr.

Cercopithecus labiatus Is. Geoffr. St. H., C. R. xv. p. 1038, 1842; id. Dict. d'Hist. Nat. iii. p. 302, 1849; Schlegel, Mus. Pays-Bas, vii. p. 79, 1876; Matschie, SB. Ges. nat. Fr. Berlin, 1893, p. 214; Forbes, Monkeys, ii. p. 72, 1894.

Cercopithecus samango Sundev. Æfv. K. Vet.-Akad. Förh. i. p. 160, 1844; P. L. Sclater, P. Z. S. 1893, p. 251; W. L. Sclater, Fauna S. Afr., Mamm. i. p. 9, fig. 2, 1900.

Coat long and thick, dark-coloured, black, speckled with yellowish grey, the back and sides of the body not more brightly coloured than the fore part, the black bands in the hair much wider than the pale. Top of head blacker than nape of head and cheeks. No half-collar on sides of neck. Tail with its basal third almost white below and laterally, the pale area much exceeding in width the pigmented area, which is confined to the dorsal surface; median portion of tail dark grey above and below, terminal portion black. Fore leg jet-black from above the elbow. Hind leg smoky grey, speckled with yellow, not sharply defined from the tint of the sides of the body; the hair external to the callosities grey tinged faintly with reddish, a little of that tint extending on to the root of the tail. Ventral surface from the chin to the pubic area whitish ashy grey, unspeckled, the same pale hue spreading over the inside of the thighs.

Loc. S. Africa: King Williamstown and Pondoland (*W. L. Sclater*). Also said to occur in Natal, Zululand, and Angola.

The description given above is taken from a specimen ticketed S. Africa, and presented to the Society in 1888. A second specimen received in 1906 resembled it in all important particulars. The pale colour of the under side of the proximal

end of the tail of this species distinguishes it at once from the rest of the species of the Albogularis-section. The uniformity in the tint of the speckling of the dorsal surface from the head to the root of the tail is another distinctive feature.

THE MONA-GROUP.

Mona Reich.; *Mona* + *Otopithecus* Trouess.

Pale colour of inner side of arms sharply contrasted, especially along the radial aspect, with the black or dark grey tint of the outer side. A black temple-band extending from eye to ear and sharply separating the colour of the cheek from that of the summit of the head. A well-defined pale brow-band, which sometimes extends over a large part of the summit of the head. Face slate-blue, but median area of lips flesh-coloured. Shoulder and anterior portion of back redder or greyer than the posterior area, which tends to turn black.

Distr. From Sierra Leone through the Gold Coast, Nigeria, and the Congo to the Ituri Forest.

Key to the Species and Subspecies.

- a. Ventral surface at least laterally and at least the margins of the limbs suffused with rusty yellow; hairs on ears rusty yellow.
- b. Outer side of hind limb from hip to ankle rusty, the colours of the thigh and sacral area sharply defined; throat and chest white; red on the belly and on the inner side of the limbs pronounced only where the white passes into the coloured outer or lateral surface *wolffi.*
- b'. Outer side of hind limb usually greyish, sometimes suffused with yellow, but the colours of the thigh and sacral areas not sharply defined from each other; the entire ventral surface (at least in the adult) yellowish or rusty red.
- c. Arms externally speckled, not black; a jet-black band considerably more than twice as long as broad and sharply defined laterally from the greyish lateral surface extending from behind the shoulders to the rump; no distinct double or U-shaped pale mark on the head *pogonias.*
- c'. Arms black; a black patch on lumbo-sacral area, if present, not sharply defined laterally and not twice as long as broad; a decided U-shaped pale patch on the head. *grayi.*
- d. Lumbo-sacral area of dorsal surface jet-black Subsp. *nigripes.*
- d'. Lumbo-sacral area usually reddish, speckled; sacral area sometimes jet-black Subsp. *grayi.*
- a'. Ventral surface, throat, and inside of limbs white at all ages; hairs on ears usually speckled.
- e. A conspicuous white patch on each side near the root of the tail *mona.*
- e'. No white patch near root of tail.
- f. Outer surface of hind legs and more or less of the lumbo-sacral area black or dark grey and scarcely speckled, contrasting with the fore part of the dorsal surface.
- g. Brow-patch white and cheeks and side of neck pale greyish, gradually passing into the white of the throat, as in *C. mona*; hairs on ear speckled *campbelli.*
- g'. Brow-patch yellow usually, ill-defined, but spreading backwards over forehead; cheeks and side of neck dark dusky greyish green, sharply defined from white of throat; hairs on ear yellowish *burnetti.*
- f'. Outer surface of hind legs and the lumbo-sacral area much the same colour as the fore part of the dorsal surface—that is to say, speckled red and black *denti.*

By Sclater and Forbes the two species *C. mona* and *C. campbelli* were placed in a group containing *C. albogularis*, *C. leucampyx*, and the rest of the black-armed species without a nose-spot. Neither of these authors appears to have detected either the close similarity between these two species, or the obvious affinity they exhibit towards *C. wolfi*, *C. pogonias*, and *C. grayi*; and in spite of Pousargues's remarks upon this point (*Ann. Sci. Nat.* (8) iii. p. 215, 1896), Trouessart (*Cat. Mamm. Suppl.* pp. 13, 14, 1904) adheres to the views implicitly expressed by the earlier writers.

CERCOPITHECUS MONA Schreb. (Text-fig. 184.)

Simia mona Schreber, Säug. i. p. 97, pl. xv., 1774.

Cercopithecus mona Erxleben, and of subsequent authors.

Brow-band whitish, broader laterally than mesially, but not extending to the ear. Head and nape speckled yellowish green; whiskers greyish, apically annulated with yellow and black. Ear-tufts long, thick, of the same colour as the hairs of the nape.

Text-fig. 184.



Cercopithecus mona Schreber.

(From a specimen living in the Society's Gardens.)

Back, shoulders, and sides of body speckled, rusty red; lumbosacral area darker, sometimes almost black. Arms black externally; legs blackish, sparsely and weakly speckled externally; hands and feet black. An elongate patch of snow-white hair extending forwards from the ischial callosity on to the hip. Tail nearly black, greyish on under side in proximal half. Chin, throat, chest, belly, inside of arms and legs white.

Loc. Nigeria and Cameroons. The British Museum has examples of this species from Jebba on the Niger (*G. F. Abadie*, 0.3.29.2); Bakana, Southern Nigeria (*W. J. Ansorge*, 2.11.2.2-3.).

Of the large number of skins of this species—one of the commonest of African Monkeys in captivity—possessed by the Society, not one has a definite locality.

CERCOPITHECUS CAMPBELLI Waterhouse. (Plate XL. fig. 1.)

Cercopithecus campbelli Waterhouse, P. Z. S. 1838, p. 61; not of subsequent authors, or, at least, only in part.

Closely allied to *C. mona*. Forehead with a large white or silver-grey brow-band extending laterally further towards the ears than in the middle, where it is partially divided. Cheeks greyish, tinged with yellow and faintly speckled with black, the hair gradually losing this tint inferiorly and on the neck, where the colour fades imperceptibly away into the uniform greyish-white colour of the throat. Hairs on ear like those on head, speckled yellow and black. Head and shoulders speckled yellow and black, the head rather yellower than in *C. mona*, and the shoulders less rusty brown. Behind the shoulders and on the arm the speckling gradually dies out of the hairs, which, at least on the lumbo-sacral area, are of almost a uniform greyish black, as also are the outsides of the thighs. Tail at base blackish above and below, and the same colour as the sacral area; following the black basal portion it is speckled above, grey below; its distal end is black.

Loc. Sierra Leone.

The type of this species came from Sierra Leone. In the British Museum there are three flat native-prepared skins: one labelled Sierra Leone (*Mr. Fraser*, 45.9.6.1); a second ticketed Buyabuya, Little Scarcies River inland of Sierra Leone (*G. F. Scott Elliot*, 92.6.7.2); and a third without locality (Zool. Soc. 55.12.24.408). I have also seen the skin of a young female specimen which formerly lived in the Gardens. It has no exact locality.

C. campbelli is in some respects intermediate between *C. mona* and *C. burnetti*. It is evidently a Monkey which is rarely captured or killed by Europeans.

CERCOPITHECUS BURNETTI Gray. (Plate XL. fig. 2.)

Cercopithecus burnetti Gray, Ann. Mag. Nat. Hist. x. p. 256, 1842.

Cercopithecus campbelli Sclater, Forbes (*nec* Gray).

This species differs from *C. campbelli* in having the forehead yellowish in front and the patch not so sharply defined; the cheeks and sides of the neck as far back as the black of the shoulders are olive-grey, speckled and strongly contrasted with the relatively narrower white area of the throat; the ear-fringe is reddish yellow and stands out against the colour of the back of the head without blending with it; the posterior region of the body is blacker and not a dark slate-grey.

Loc. Gold Coast to the Cameroons.

The British Museum has a skin of this species, a young example, ticketed Cameroons (*Capt. Burton*, 82.6.12-1). Two specimens that lived recently in the Gardens came respectively from Ashanti and Accra.

In the collection of the Society there are a large number of skins of various ages, labelled W. Africa, most of which were identified by Dr. Sclater as *C. campbelli*. Living examples are far more commonly procured than are those of the veritable *C. campbelli*. One or more may usually be seen in the Society's Gardens.

C. burnetti Gray, alleged to be from Fernando Po, is added to the synonymy of *C. campbelli* by both Sclater and Forbes, who described the present species under that name. The description of *C. burnetti* runs as follows:—"Greyish black; head, neck, and upper part of back yellow dotted; throat, cheek, abdomen, inner side of fore legs and thighs greyish white; face black; hair of cheek and forehead yellow, with a small tuft of black hair over each eye; fur very thick; hairs long, rather rigid, pale at the base, then greyish black; those of the head, neck, and upper part of the back and base of the tail with two or three broad yellow-brown subterminal bands. Length of body and head 19 inches."

This description cannot be said to fit accurately the species here identified as *C. burnetti*, but I think it may be regarded as probable that Gray had a specimen of that species in his hands when he described *C. burnetti*.

CERCOPITHECUS DENTI THOS.

Cercopithecus denti Thos. P. Z. S. 1907, p. 2, pl. i.

Brow-band not very well defined, consisting of hairs white at the base and banded apically. Ears with white hairs. Summit of head to shoulders grizzled greenish; sides of head and neck greener than head and nape. Back and upper part of sides brownish, the hairs banded with black and red. Tail pale beneath, greyish above, black at the distal end. Fore leg externally grizzled greenish to elbow, black from elbow to hand. Hind leg from the hip to the ankle speckled, yellower than lumbo-sacral area; distal half of foot black. Under side and inside of limbs white, the white of the belly passing halfway up the sides, and everywhere, both on the limbs and body, very sharply defined from the pigmented areas.

Loc. Ituri Forest.

CERCOPITHECUS WOLFI MEYER.

Cercopithecus wolfi Meyer, Notes Leyden Mus. xiii. pp. 63-64, 1890; P. L. Sclater, P. Z. S. 1893, p. 258; Meyer, P. Z. S. 1894, p. 83, pl. vii.; Forbes, Monkeys, ii. p. 79, 1894.

Loc. Congo.

Meyer's description of this species is so full and exact that no repetition of it is necessary. The characters are also well shown

in the plate in the 'Proceedings of the Zoological Society' for 1894.

The exact locality of the type was not known; but in August, 1904, a beautiful example of the species, obtained by Mr. J. D. Hamlyn in Brazzaville, on the Congo, whither it was brought by natives, was deposited in the Zoological Gardens by the Hon. Walter Rothschild.

Dr Forbes quite correctly placed this species in the same category as *C. grayi*. In this he has been followed by Trouessart.

The most distinctive characteristics of the species are:—the extension of the white brow-band laterally as far as the ears; the reddish-brown colour of the hind legs from the hip to the ankle, the hairs of this limb, however, are distinctly speckled with black; the presence of an ill-defined dorsal blackish band and of a considerable quantity of yellow in the hairs on the sides of the body and on the belly, and bordering the white of the inner side of the limbs.

CERCOPITHECUS GRAYI FRASER.

Subsp. GRAYI FRASER.

Cercopithecus grayi Fraser, Cat. Knowsl. Coll. p. 8, 1850; Matschie, SB. Ges. nat. Fr. Berlin, 1893, p. 214; Forbes, Monkeys, ii. p. 77, pl. xxiii., 1894 (bibliography).

Cercopithecus eralebeni Dahlb. & Puch. Rev. Mag. Zool. 1856, p. 96.

Brow-band greatly developed and extending backwards on to summit of head as a pair of whitish patches, separated mesially by a narrow area of blacker hair. A broad black band across the temple. Cheeks speckled with greenish yellow and black. Ear-fringes long, yellowish red, standing boldly out against the background of the head and neck. Dorsal surface uniformly rusty red nearly all over, jet-black on sacral region, yellower on nape of neck; the sides sometimes greyer (in the male); arms black externally; legs greyish, speckled down to ankles; hands and feet black. Tail mostly black, reddish in its basal half below. Under side from chin to pubic region and inside of limbs rufous yellow.

Loc. The British Museum has specimens from the following localities:—Efulen in the Cameroons (*G. L. Bates*, 96.3.20.1); Benito River, Congo (*G. L. Bates*, 0.2.5.4-6); Gaboon (*Laglaize*, 80.6.7.2).

Pousargues, who, perhaps rightly, regarded *C. pogonias*, *C. eralebeni*, and *C. nigripes* as synonyms, and at most as representing local races, records specimens from various places in the French Congo, namely from Ogoûé, Mayumbé, Bangui, and Ouadda, Upper Oubangui. With the exception of the specimen from Mayumbé, none of these showed traces of black on the back.

Pousargues and Trouessart reject the name *grayi* for this species, alleging that no description accompanied its first publication. This is an error. Fraser gave a good though brief diagnosis of the species in the work cited above.

Three adult specimens from the Benito River taken at sea-level, 20 miles from the coast, gave the following measurements in the flesh:—

♂.	Head and body	525 mm.,	tail	750 mm.
♂.	" "	547 "	" "	870 "
♀.	" "	440 "	" "	785 "

According to Bates the Fang name is "Shumé."

Judging from some skins, without definite locality, in the collection of the Zoological Society, the under side and inner surface of the limbs are much whiter, in some cases, indeed, almost untinged with yellow in immature forms.

Subsp. *NIGRIPES* Du Chaillu.

Cercopithecus nigripes Du Chaillu, P. Bost. N. H. Soc. vii. p. 360, 1860.

Loc. Gaboon (*Du Chaillu*, 61.7.29.16 in B.M.).

The single skin of this form that the British Museum possesses is only distinguishable from typical representatives of *C. grayi*, as exemplified by the specimens from the Benito River, by the greater amount of black over the lumbo-sacral area. In this particular *C. nigripes* is nearly intermediate between the typical *C. grayi* and *C. pogonias*; but in the latter the black shield is sharply defined along its edges and relatively much longer as compared with its width.

CERCOPITHECUS POGONIAS Bennett.

Cercopithecus pogonias Bennett, P. Z. S. 1833, p. 67; and of most subsequent authors.

Allied to *C. grayi*. No lateral white or yellowish-white stripe on the head above the temple-stripe. Head, neck, shoulders, fore legs, and sides of body speckled yellow and black, with more grey in the hair on the sides of the body than on the shoulders. The entire dorsal area behind the shoulders covered with a broad band of jet-black hair, imperceptibly blending with the speckled hair of the shoulders in front, but very sharply defined from the greyish-speckled hue of the sides of the body. Outer side of thighs greyish, tinged with yellowish red. The entire under surface and the inside of the limbs are rusty red. The basal half of the tail is red beneath, black above, and the terminal half is wholly black.

Loc. Exact locality unknown. Said to be Fernando Po.

The above-given description is taken from two flat native-prepared skins in the British Museum. They appear to agree with the example described by Bennett, a very young thick-coated specimen mounted in the British Museum, except in the definition of the dorsal black area. In Bennett's specimen the shield is smaller and only sharply defined on the sacral area.

Pousargues records a specimen referable either to typical *C. pogonias* or to *C. grayi nigripes* from Cette Cama.

THE L'HOESTI-GROUP.

This section, containing the single species *C. lhoesti*, resembles *C. opisthostictus* of the Leucampyx-section in the blackness of the legs, shoulders, and belly, and in a lesser degree of the head. The rufous dorsal area, on the other hand, recalls the Albogularis-group. From the latter, however, as well as from all the species of the Leucampyx-section, it differs entirely and resembles the typical *C. ethiops* of the Æthiops-section in the upward direction and snow-white colour of the longish cheek-hairs. The white throat and whiskers, as well as the direction of growth of the latter, and the thickish clothing of black hair on the nose suggest affinity with *C. erythrogaster*.

CERCOPITHECUS L'HOESTI Sclater.

Subsp. L'HOESTI Sclater. (Plate XLI. fig. 2.)

Cercopithecus lhoesti P. L. Sclater, P. Z. S. 1898, p. 586, pl. xlviii.; Matschie, SB. Ges. nat. Fr. Berlin, 1905, pt. 10, pp. 262-264.

Face (dry skin) black; nose thickly, lips more sparsely clothed with black hairs; area of face below the eye clothed with a mixture of short black and white hairs, which posteriorly become longer and run up over the whiskers. The latter white, long, and directed upwards and backwards to form a thick fringe between the face and the ear, partially concealing that organ and continued on to the sides of the neck behind it. The throat and posterior half of the interramal area white like the cheeks, the white continued posteriorly in a narrow point as far back as the mammae. Summit of head black, but the whole of its median area, like that of the nape of the neck and the sides of the area between the shoulders and the sides of the body above the belly, speckled with greyish white. On the middle of the area between the shoulders begins a band of hairs speckled black and orange-red, which gradually expands posteriorly over the costal and lumbar regions and dies away upon the hip and towards the root of the tail, the orange-red in the hairs being in these places replaced by grey. Tail for the most part grey speckled with black, its distal third blacker, quite black at the end; also about four inches of the under side at the base black. The shoulder and fore limb, the hip and the hind limb jet-black outside and inside. The entire ventral surface black with a tinge of brown from the clavicular region to the anus, with exception of the above-mentioned white median angular area on the fore part of the chest.

Loc. Chepo or Tschepo in Congoland.

A single adult ♀ (type) from the above-mentioned locality, which lived in the Society's Collection from July 1898 to March 1902.

Unless the specimen changed considerably in colour during captivity, which is not impossible, the original description is inexact.

Dr. Sclater, for example, applied the term "cinereous" to the belly, limbs, and tail, the tail being said to be blackish below. The tail is, as a matter of fact, heavily speckled with grey throughout the greater part of its length, being greyer below than above, except at the base and apex, and the limbs and belly show no trace of grey speckling to account for the epithet "cinereous."

According to Matschie there is a specimen of this Monkey from Tschepo in the Tervueren Museum.

Subsp. THOMASI Matschie.

Cercopithecus thomasi Matschie, SB. Ges. nat. Fr. Berlin, 1905, p. 262.

So far as I can determine from the description, this form, to which Matschie gives full specific rank, differs from the typical form in being chestnut-red above, in having a much more distinct band of greyish-white hair below the eyes, and in the extension of the white on the chest to about the middle of the sternal area.

Loc. East shore of Lake Kivu between Lakes Tanganyika and Albert Edward.

THE ERYTHROGASTER-GROUP.

CERCOPITHECUS ERYTHROGASTER Gray. (Plate XLI. fig. 4. Text-fig. 185, p. 716.)

Cercopithecus erythrogaster Gray, P. Z. S. 1866, p. 169, pl. xvi.; id. Cat. Monkeys Brit. Mus. p. 128, 1870; Murie, P. Z. S. 1866, p. 380; Schlegel, Mus. Pays-Bas, vii. p. 69, 1876; P. L. Sclater, P. Z. S. 1893, p. 252; Matschie, SB. Ges. nat. Fr. Berlin, 1893, p. 226; Pousargues, Mém. Soc. Zool. Fr. vii. p. 71, 1894; Sclater, P. Z. S. 1894, p. 1; Forbes, Monkeys, vol. ii. p. 46, 1894; Pousargues, Bull. Mus. Paris, iii. p. 52, 1897.

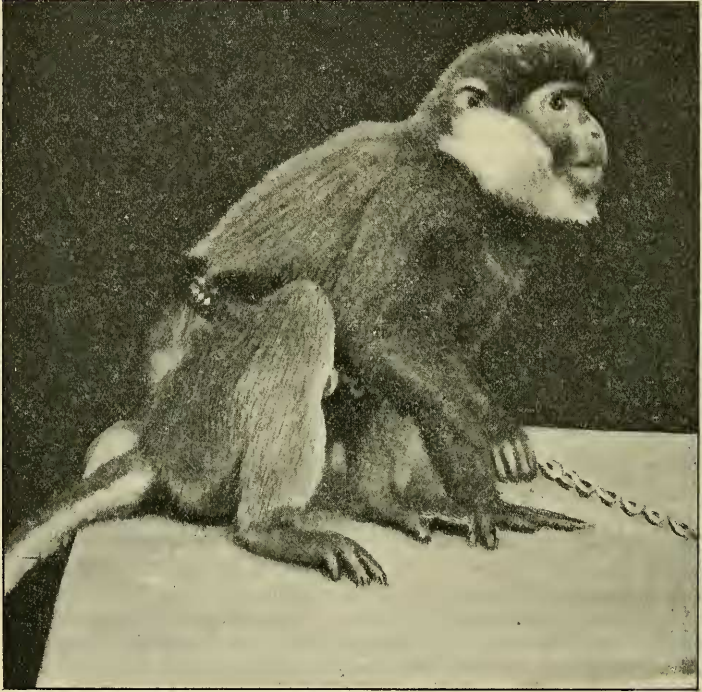
Skin of face round eyes bluish grey, lips and chin pinkish grey. Nose clothed with black hairs, which, at least in some cases, apparently turn white in the adult. Crown of the head speckled golden green and encircled with a continuous black brow, temple, and parieto-occipital stripe. Below the temple-stripe a conspicuous greyish-speckled patch close to the face, and beneath the latter a smaller black patch near the corner of the mouth, which is continued backwards and upwards in the direction of the ear. The area of the cheek below this and the throat covered with a thick mass of longish white whiskers. The entire dorsal surface uniformly coloured blackish speckled with yellow, darker than the head. Outer side of fore limbs with evanescent speckling, nearly black; hands blacker; of hind limbs blackish grey but speckled; feet black. Upper side of tail like the back; under side greyish white; chest and belly rusty brown; inside of fore legs blackish grey; of hind legs greyish white.

Loc. Lagos (sec. Pousargues).

This species was based upon a young specimen showing no trace of the white nasal patch characteristic, as was afterwards shown,

of some adults. In 1893 Sclater, to whom only the young was known, classified the species in his "melanochirine" section; but in the same year Matschie pointed out its affinity to the "spot-nosed" group. This observation was corroborated in 1894 and again in 1897 by Pousargues, who added to our knowledge of the species the fact that the nasal field is completely naked in the young individual and covered with white hairs in some adult examples. In the type specimen, as asserted by Sclater, the area

Text-fig. 185.

*Cercopithecus erythrogaster* Gray.

(From a specimen living in the Society's Gardens.)

in question is clothed with black hairs with whitish bases. Hence it seems probable that the condition of this specimen represents a stage intermediate between that of the naked-nosed young and of the white-nosed adult observed by Pousargues. There is, however, an example (text-figure 185) now living in the Gardens which appears to be almost or quite adult and the nose is jet-black.

Pousargues placed this species in close proximity to *C. petaurista*,

which is probably its nearest ally, as is shown principally by the arched inferior cheek-stripe and the extension of the white of the chin and throat up to the ear forming white whiskers. The differences between the species are, however, very marked, especially in the redness of the belly, the very conspicuous grey patch on the cheek adjacent to the face, the blackness of the nose until maturity or old age is reached, and the marked difference in colour between the under side of the body and the inside of the limbs in *C. erythrogaster*.

THE PETAURISTA-GROUP.

Rhinostictus Trouess.

Skin of face round the eyes slate-blue or blackish; of lips pale bluish grey. Usually, probably always in the adult, a distinct black brow-band continuous with a black band extending across the temple on each side backwards to the ear. Area between the eyes with a strip of black hair, which expands on the nose and is confluent with a large cordate white patch narrowing below between the nostrils and transverse, convex, or mesially emarginate above. Dorsal surface from occiput to tail almost uniformly coloured, black speckled with greyish or reddish yellow. Ventral surface from chin to pubic region white or greyish white, paler on inner than on outer side of limbs; pale area on inner side of upper arm sharply contrasted with the darker tint of the outer side. Lower surface of tail pale, at least in its proximal portion, and sharply defined in colour from the upper surface.

Distr. From Liberia and Angola eastwards up the Congo Valley to Uganda.

Key to the Species and Subspecies.

- | | | |
|-----|---|----------------------------|
| a. | White of the throat extending upwards on to the cheek almost to the level of the top of the ear, the hairs growing upwards and backwards, and bordered by an upwardly-arched black stripe running from the upper lip beneath the ear; arms black to the wrist | <i>petaurista.</i> |
| b. | A black band, more or less developed, crossing the back of the head; no distinct patch of greyish-yellow hair on the cheek below the eye | Subsp. <i>petaurista.</i> |
| b'. | No black band crossing the back of the head; a distinct patch of greyish-yellow hair on the cheek below the eye | Subsp. <i>buttikoferi.</i> |
| a'. | White of the throat not extending up on to the cheek; the hairs, at least of the lower portion of the cheek, growing downwards and backwards; arms black to the wrist. | |
| c. | Hairs of the cheek yellowish or whitish and marked off from those of the throat by a more or less well-defined black stripe running straight backwards from the upper lip beneath the ear | <i>ascanius.</i> |
| d. | Black stripe crossing the lower portion of the cheek broad and expanding on the face adjacent to the upper lip; hairs on ears red | Subsp. <i>ascanius.</i> |
| d'. | Black stripe crossing lower portion of cheek narrow and fading away towards the corner of the mouth; hairs on ears white | Subsp. <i>schmidti.</i> |
| e'. | Hairs on the cheeks speckled like those on the top of the head; no inferior stripe on the cheek | <i>signatus.</i> |

CERCOPITHECUS PETAURISTA Schreber.

Subsp. PETAURISTA Schreb.

Simia petaurista Schreber, Säug. i. p. 103, pl. xix. B, 1775.*Cercopithecus petaurista* Erxleben, and of subsequent authors.*Cercopithecus fantiensis* Matschie, SB. Ges. nat. Fr. Berlin, 1893, p. 64.

Brow-band and temple-band well developed, the latter extending round the back of the head as a parieto-occipital stripe. The anterior part of the cheek and the adjacent area of the face down to the corner of the mouth continuously clothed with jet-black hairs. Some little distance behind the corner of the eye on the temple there is a whitish stripe, which runs obliquely backwards and downwards beneath the ear; and underlying this there is a conspicuous black stripe, which passes downwards and backwards from the black anterior portion of the cheek on to the side of the neck. The white of the throat runs up on the cheek considerably above the corner of the mouth as high as a point on a level with the bottom of the ear, the hairs being directed obliquely upwards and backwards. The black hairs of the cheek just in front of this uprunning white area are also directed upwards and backwards. The top of the head, the neck, shoulders, back, and limbs speckled, the head, neck, and limbs being yellower or greener and distinctly less red than the back. The tail speckled throughout above; greyish white below.

Loc. Gold Coast: Sekondi (in Zool. Soc., *Dr. Carew*); Rio Bontag, Cape Coast (type of *fantiensis*).

Subsp. BUTTIKOFERI Jent. (Plate XL. fig. 6.)

Cercopithecus buttikoferi Jentink, Notes Leyden Mus. viii. p. 56, 1886.

Distinguishable from the typical form *C. p. petaurista* by the characters indicated in the key, namely by the absence of the parieto-occipital black band and the presence of a patch of greenish speckled hairs on the cheek adjacent to the face just below the eye. But since some examples I refer to *C. p. petaurista* have indications of this last-mentioned patch, and since the black parieto-occipital band varies greatly in the degree of its development, these two features must be regarded, I think, as of sub-specific value. It may be added that Dr. Jentink does not mention the presence of the pale facial patch in his description of *C. buttikoferi**. It is, however, present in all the examples that I refer to this form, and was, I presume, overlooked as a distinctive feature when the original diagnosis was compiled.

Loc. Liberia.

* Sir H. H. Johnston possibly detected this difference, for he says that *C. buttikoferi* differs most markedly from *C. petaurista* in having a long white mark over the ridge of the eyebrows, stretching from the bridge of the nose right across the face to below the ear ('Liberia,' ii. p. 679). This description, however, does not fit examples of this Monkey I have seen.

CERCOPITHECUS ASCANIUS Aud.

Subsp. ASCANIUS Aud. (Plate XL. fig. 5. Text-fig. 186.)

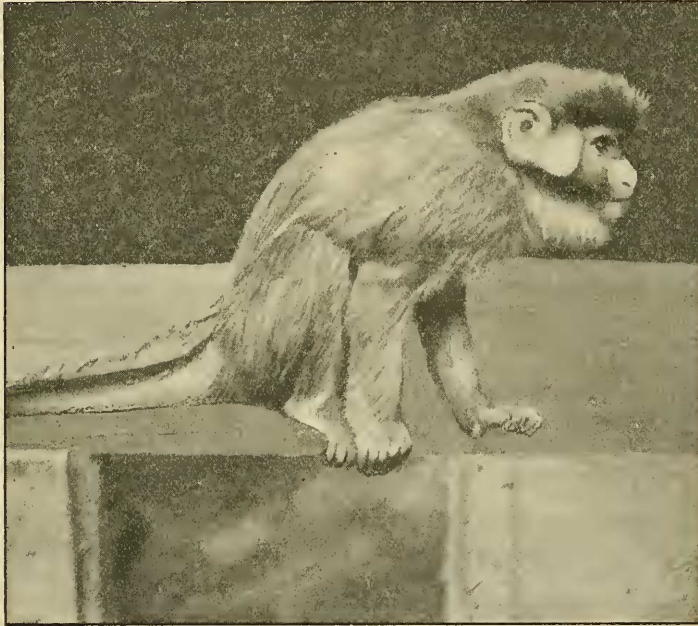
Simia ascanius Audebert, Hist. Nat. Singes, fam. IV. sect. ii. pl. xiii., 1799.

Cercopithecus melanogenys Gray, Ann. Mag. Nat. Hist. xvi. p. 212, 1845; id. P. Z. S. 1849, p. 7, pl. ix. fig. 2.

Cercopithecus hystrio Reichenbach, Affen, p. 106, pl. xviii. figs. 256-257, 1863.

Cercopithecus picturatus Santos, Jorn. Sci. Lisboa, xi. p. 98, 1886.

Text-fig. 186.



Cercopithecus ascanius Aud.

(From a young specimen living in the Society's Gardens.)

At once distinguishable from *C. petaurista petaurista* and *C. p. buttikoferi* by the colour and arrangement of the hair on the cheek. There is typically a black brow-band extending across the forehead and backwards to the ear, but not over the back of the head. Beneath this, in front of the ear upon the cheek, there is a large patch of yellowish-white hair arranged radially in a whorl, and below this whorl a large black stripe extends from beneath the ear, where it is thinnest and palest, forwards on to the sides

of the face between the corner of the mouth and the eye. Hairs on the ear pale red. Fore leg blackish, only sparsely and faintly speckled. Hind leg also blacker than in *C. petaurista*. Tail red above and below in the distal three-fourths of its length, whitish-grey below at the base, and for a couple of inches above at the base the same colour as the back.

Loc. The Congo; Oubangui and Adima (*Pousargues*) to Angola; Encôge, south of Bamba*; Quimpampala (*Santos*).

I have seen several young examples referable to this species, but for none of them was a definite locality known. All were imported by dealers and deposited in the Gardens by the Hon. Walter Rothschild. They exhibited considerable variability in the width of the black stripe on the cheek, and also in the stripe crossing the brow and temple. In typical *C. melanogenys* the whole area of the cheek between the eye and the corner of the mouth is black, and the brow and temple-bands are well defined. In the Zoological Society's Collection there is a skin, dated 14.8.1900 to 21.7.1901, which very nearly agrees with this; but in a small example now living in the Gardens the black area below the eye is interrupted by a conspicuous patch of yellow-speckled hair, reducing the extent of the black area, and the temple-band is hardly developed. In another that died about eighteen months ago the black band was still further reduced both in length and width, the temporal and brow bands were practically absent, and the nose-spot was tinted with yellow. These facts indicate the probability of the existence of two or more unnamed subspecies; and since the specimens are intermediate between typical examples of *C. ascanius* and of *C. schmidti*, they have influenced me in concluding that the latter form is an East African subspecies of the former. Were it not for the presence of red instead of white hairs upon the ears, I should have been in doubt to which of the two forms to refer the above-mentioned specimens.

Subsp. SCHMIDTI Matschie. (Plate XL. fig. 4.)

Cercopithecus schmidti Matschie, Zool. Anz. 1892, p. 161; P. L. Sclater, P. Z. S. 1893, p. 245, pl. xvi.; Johnston, Uganda, i. pp. 363, 364, and p. 421, coloured plate facing p. 364.

Differs from the typical form of *C. ascanius* in having a fringe of long white hair on the ears, and in that the hairs on the cheek adjacent to the face beneath the black temporal stripe and backwards beneath the ear are greyish yellow and weakly annulated apically; they are directed downwards and forwards or backwards (in dried skins), and form a thick crest with the hairs of the area below, which grow obliquely upwards and backwards from the corner of the mouth and, being thickly annulated with black, form a dark stripe extending beneath the ear to the neck. None of the examples that I have examined have, on the cheek, the distinct radiating whorl of yellowish hair noticeable in typical *C. ascanius*.

* Monteiro, P. Z. S. 1860, p. 112.

In the British Museum there are specimens of this local race from the following localities:—Uganda (*P. J. Jackson*, 99.8.4.1; *Capt. H. J. Nadorhr*, 98.10.10.1); Port Alice (*H. H. Johnston*, 1.8.9.16); Manyema (*Beche Coll.*, 93.1.1.1); Bumba, Upper Congo (*Capt. Wejys*, 1.5.4.1).

CERCOPITHECUS SIGNATUS Jentink. (Plate XL. fig. 3.)

Cercopithecus martini P. L. Scater, P. Z. S. 1884, p. 176, pl. xiv.; 1893, p. 245 (*nec* Waterh.).

Cercopithecus signatus Jentink, Notes Leyden Mus. viii. p. 55, 1886; Pousargues, Ann. Sci. Nat. (8) iii. p. 206, 1896.

A well-marked species of this group and most nearly allied to *C. ascanius schmidti*, but distinguishable at once by the colour and direction of growth of the hairs on the cheek. The black brow- and temple-bands are well developed. The area of the cheek beneath the latter, down to a line on a level with the corner of the mouth, is covered with hairs speckled greenish yellow and black and of the same colour as those on the top of the head, and directed obliquely downwards and backwards. Low down on the cheek they gradually blend with the white of the throat. On the anterior part of the cheek adjacent to the upper lip there is a single rather conspicuous black patch. Hairs on ear white. The top of the head and the neck are uniformly speckled yellow and black; on the back, and especially on the lumbo-sacral area, the colour is more rufous than anteriorly. Lastly the tail is not red, but coloured like that of *C. petaurista*.

Loc. W. Africa (exact locality doubtful).

In the collection of the Society there is a single skin I refer to this species. It is ticketed Fernando Po, and belonged to a female that lived about ten years in the Gardens, since it bears the dates 19.2.84 to 6.4.94. This is the example that Dr. Scater described and figured as *Cercopithecus martini* Waterhouse. An examination of a co-type of the latter in the British Museum proves this identification to be erroneous, as Pousargues supposed. If Pousargues, however, had seen a specimen of *C. signatus* and had been acquainted with *C. buttkoferi*, he would probably have given a different classification of the "*Rhinosticti*" from that which is printed in his excellent essay on the Monkeys of the French Congo.

THE CEPHUS-GROUP.

Rhinostictus Trouess. (in part.).

Resembling the typical species of the Petaurista-group in the practically uniformly speckled colouring of the head, dorsal area, and sides of the body, and usually in the presence of a black brow-band extending backwards to the ears, and of a second black stripe separated from the former by a patch of yellowish hair, and running from the region of the upper lip for a varying distance

backwards towards the lower edge of the ear; but having the throat, chest, belly, and the inside of the limbs, at least proximally, dark ashy grey and not white or greyish white. Nose-spot, when present, subquadrate or diamond-shaped.

Distr. W. Africa: Benin, Cameroons, and Congo.

Key to the Species.

- a.* Upper lip with a moustache of short black hairs underlying a clear pale blue transverse stripe; chin black; nose naked or clothed with pale pubescence; no black brow-band *cephus*.
- a'.* Upper lip with black hairs only towards the corner of the mouth; no blue stripe; chin pale (? flesh-coloured); nose with distinct patch of red or white hairs; a distinct black brow-band.
- b.* Nose-patch red; ear-fringe red; no occipital stripe; some black below elbow; legs greyish black, darker than back; tail red, except above at base *erythrotis*.
- b'.* Nose-patch almost wholly white; ear-fringe white; an occipital stripe; arms and legs grey, speckled, paler than dorsal surface; tail red in its proximal half beneath *sclateri*.

CERCOPITHECUS CEPHUS Linn. (Plate XLI. fig. 3.

Text-fig. 187, p. 723.)

Simia cephus Linn. Syst. Nat. i. p. 39, 1766.

Cercopithecus cephus of most subsequent authors.

Face bluish slate-grey, with a brilliant whitish-blue stripe on the upper lip beneath the nostril extending obliquely outwards from the middle line. Beneath this a moustache of black hairs borders the lips, and expanding externally merges with the black hairs clothing the lower part of the cheek close to the face. Some black or blackish hairs also on the chin. Nose naked or clothed with pubescence, which never forms a very definite patch. Hairs on the cheek directed obliquely downwards and backwards; those just beneath the temple-stripe clear yellow, except close to the ear, where they are annulated. Beneath this patch the hairs are strongly annulated black and yellow, the black predominating near the face. Hairs on ear yellowish white. On the upper side of the head the pale annuli on the hairs are greener than those on the body, which are almost rusty red. On the outside of the limbs, too, the hairs are speckled, but the dark element is dominant, making them darker than the body; hands and feet black. Tail variable in colour, mostly coppery red or coloured much like the back above and grey below.

Loc. Congo and Gaboon.

The specimens of *C. cephus* that I have seen may be referred to two categories characterised by the colour of the tail, which is red in the one and the same colour as the body in the other. I do not certainly know what value in taxonomy this feature possesses. It was well known to Pousargues*, who pointed out that of the series of ten specimens in the Paris Museum all have red tails except three, which came respectively from Doumé-Ogowé (? Doumé on the Ogoué) and Mayumba, near the ocean (? sea-level), all

* Ann. Sci. Nat. (8) iii. p. 211, 1896.

being adult females. The others were an adult male from Samkitta-Ogowé (? Samkitta on the Ogoué); a very young specimen of doubtful sex, a semi-adult male, and an adult female from San Benito; an adult male from Ogoné; and two adult males from the Forest of Mayumba. That the difference is not attributable either to age or sex, is proved by the fact that all the specimens known from the Benito River and San Benito in the British and Paris Museums, whether old or young, male or female, have the tail red. Moreover, Pousargues lays stress upon the fact that all

Text-fig. 187.



Cercopithecus cephus Lim.

(From a young specimen living in the Society's Gardens.)

the specimens known to him with tails coloured like the body were females. But in the British Museum there is a male specimen, just adult, as shown by its teeth, in which the tail is also coloured in that way. This example is ticketed "Gaboon (*Laglaize Coll.*, 80.6.7.3)." In addition to this, there are two skins in the collection of the Society, ticketed W. Africa, which resemble the above-mentioned Gaboon specimen in the similarity in colour between the tail and the body. They also resemble it, and differ

from the examples of *C. cephus* from the Benito River, in having a thick fringe of yellowish-white hair upon the ears, and in having a greater quantity of black in the hairs on the crown of the head.

Pousargues did not admit that any systematic importance was to be attributed to the absence of red in the tail. But his series of skins does not establish the fact that the two forms occur together in the same locality. If that were the case, I think one would be compelled to assume, from the available evidence, that *C. cephus* is dimorphic with respect to the colour of the tail. It may be so; but, pending the establishment of this conclusion, and in consideration of the possibility of the character being correlated with a difference of distribution or habitat, I think it should be nominally emphasized, and the two forms be known by distinct names until their identity has been fully established.

That the name *cephus* must be assigned to the red-tailed form is proved by the original diagnosis of Linnæus, which says:—
“*cauda medietas ultima ex ruffo flavescens . . . cauda apice ferruginea.*”

The two may be contrasted as follows:—

- a. The tail, at least in its distal portion, coppery red above and below;
hairs on the ear white Subsp. *cephus*.
a'. Basal portion of tail the same colour as the sacrum above and
greyish below, becoming gradually darker distally; a thick fringe of
yellowish hairs on the ear..... Subsp. *cephodes*.

I regard as typical *C. cephus* some examples in the British Museum, two males and two females from the Benito River, Congo, and one female from Como River, Gaboon, collected by Mr. G. L. Bates. All are adult, and although taken practically at sea-level, they have remarkably long and thick coats. Two females, shot in June and July, are more richly coloured than one shot in December, and are perhaps a little longer in the coat. A male killed in October is long-coated and coloured like a female killed in June.

The Benito River specimens give the following measurements:—

♂	Head and body	580 mm.	tail	780 mm.
♀	“	“	“	“
♀	“	475	“	670
♀	“	490	“	720
♀	“	495	“	690

The type of *C. c. cephodes* is the above-mentioned specimen, a subadult male, in the British Museum, ticketed “Gaboon (*Laglwize Coll.*, 80.6.7.3).” The total length of the head and body of the dried and twice made-up skin is 413 mm., and of the tail 575 mm. I have seen other examples of this subspecies living in the Gardens. One was brought by Mr. Hamlyn from the forest between Loangc and the Gaboon. In addition to these there are two skins in the collection of the Society. One of these

belonged to the animal that lived in the Gardens from August 1887 to January 1893. It must therefore have been at least about six years old. It differs from the type in being less yellowish red on the back, and in having the fore and hind limbs and tail much greyer. The second resembles the first, but is smaller and less vividly tinted. In both these menagerie-specimens the nose and interocular area are quite naked. In the type, on the contrary, the nose is covered with greyish pubescence. Similar pubescence, moreover, is observable in varying quantity upon the noses of the British Museum examples of *C. cephus cephus*. It has been stated by Pucheran (Rev. Mag. Zool. 1857, p. 195) and by Ponsargues (Bull. Mus. Paris, iii. p. 52, 1897) that in the young of *C. cephus* the nose is covered with a diamond-shaped patch of hairs. This statement is not borne out by all the young examples that I have seen.

CERCOPITHECUS ERYTHROTIS Waterh. (Plate XLI. fig. 5.)

Cercopithecus erythrotis Waterh. P. Z. S. 1838, p. 59, and 1841, p. 71 (and of subsequent authors).

The essential characters of this species are stated in the above-given key (p. 722).

Loc. W. Africa: Fernando Po and Cameroons.

Ponsargues classified this species with his *Ascanius*-section of the *Rhinosticti*; but I think there is no doubt that its affinities lie with *C. cephus*, which that author excluded from the *Rhinosticti*.

CERCOPITHECUS SCLATERI Poc.

Cercopithecus sclateri Poc. P. Z. S. 1904, pp. 433-436, fig. 87 (in text).

The characters of this species are described and its affinities discussed at length in the paper cited above.

Loc. W. Africa: Benin.

THE ÆTHIOPS-GROUP.

Cercopithecus Erxl. (*s. s.*) + *Chlorocebus* + *Cynocebus* Gray.

Face and ears black, very rarely pale and mottled with dark pigment, sometimes with white hairs on the lips. Head and upper side of body fairly uniformly speckled black and grey, yellow, or very rarely red. Outside of both fore and hind limbs also speckled and never darker, very generally lighter than the body. Tail mostly the same colour as the body, the end sometimes black or yellow. Whiskers, except in *C. nigroviridis*, directed upwards. Under side and inside of limbs pale.

Distr. From Sierra Leone to Abyssinia, thence southwards to Cape Colony.

Key to the Species.

- a. Whiskers dusky olive, almost the same colour as the top of the head, though less yellow, directed backwards, with scarcely a trace of upward trend *nigroviridis*.
- a'. Whiskers, at least on the lower half of the cheeks, white or yellowish, and quite differently coloured from the top of the head, with marked backward and upward trend.
- b. No distinct white brow-band; yellow whiskers with a parting or whorl in front of the ear, half running up in front of that organ and half backwards beneath it, the ear being wholly exposed *sabæus*.
- b'. A white brow-band; no parting in whiskers, the long hairs of which run backwards and upwards, so as to conceal the ears if long enough.
- c. Tail shorter than body *djamdjamensis*.
- c'. Tail longer than body.
- d. Prevailing colour of dorsal surface chestnut-red, speckled black *matschiei*.
- d'. Prevailing colour of dorsal surface yellowish, greenish, or grey, speckled black.
- e. A considerable but varying quantity of silky-white hairs on the lips and chin; scrotum slate-blue.
- f. Whiskers long and white, sharply defined in colour from the top of the head; a tuft of hairs at root of tail *æthiops*.
- f'. Whiskers short and grizzled above, where they blend in colour with the top of the head; no tuft at root of tail *cynosurus*.
- e'. Face sooty black, no silky-white hairs on lips or chin.
- g. Whiskers rather sharply defined in colour from the top of the head; a tuft of hairs at the root of the tail on each side; no red at root of tail; scrotum slate-blue; hands and feet grey, end of tail yellow *tantalus*.
- g'. Whiskers blending in colour with the top of the head; no tuft on each side of the root of the tail, which is red below; scrotum turquoise-green; hands, feet, and end of tail black or dusky in adult *pygerythrus*.

On account of the brevity of the descriptions of *C. matschiei* and *C. djamdjamensis*, I have been compelled to place them in the above-given key in such a manner that no clue to their true affinity is supplied. They are probably offshoots either of *C. æthiops* or *C. pygerythrus*. It would perhaps have better expressed the affinities of the last four species if *C. tantalus* and *C. æthiops* had been put under one heading, and *C. cynosurus* and *C. pygerythrus* under another.

CERCOPITHECUS SABÆUS Linn. (Plate XLII. fig. 1.)

Simia sabæa Linn. Syst. Nat. ed. 12, i. p. 38, 1766; Schreber, Säug. i. p. 100, pl. xviii., 1774; Audebert, Hist. Nat. Singes, fam. IV. sect. ii., 1799 (in part.; *nec* fig. iv.).

Cercopithecus sabæa Erxleben, Syst. Regni Anim. p. 33, 1777.

Le Callitriche, F. Cuvier, Hist. Nat. Mamm. i. pl. iv., 1819 (*Cercopithecus sabæus* in the Tabl. Gén. et Méthod. p. 1, 1824).

Cercopithecus sabæus Wagner, Martin, Matschie, and other authors.

Chlorocebus sabæus Gray, Cat. Monkeys Brit. Mus. p. 25, 1870.

Cercopithecus werneri Is. Geoffr. St. H., C.R. Acad. Sci. xxi. p. 874, 1850; id. Cat. Méthod. Mamm., Primates, p. 23, 1851; id. Arch. Mus. v. p. 539, pl. xxvii., 1851.

Cercopithecus callitrichus Is Geoffr. St. H., Cat. Méthod. Mamm., Primates, p. 23, 1851; and of Reichenbach, Sclater, Forbes, and most recent authors.

Face and lips black, scantily clothed with black hairs. No white brow-band except sometimes an indistinct one formed by the greyish basal portion of the hairs. Whisker-hairs yellow and strongly contrasted in colour with the hairs of the top of the head: their mode of growth characteristic; they run vertically upwards in front of the ear and horizontally backwards beneath it, so that the ear and a varying amount of the cheek in front of it are left uncovered. Colour of dorsal area of head and body greenish, resulting from the yellow and black annulation of the individual hairs, the varying width of the yellow annuli—of which there is frequently only one—causing a corresponding variation in the greenness of the pelage. Limbs greyer than the back; hands and feet grey, not black or brown. Tail darker than the back above, bright yellow at its distal end; the root of the tail beneath, the scrotal area in the male, and the pubic area in the female with intenser; sometimes almost rufous-yellow hairs. Throat, chest, and belly greyish or yellowish white. Scrotum slate-blue.

Loc. Senegambia, Sierra Leone, and Northern Liberia. Also introduced into some of the Cape Verde and West Indian Islands, and still abundant at least in Barbados.

This is one of the commonest Monkeys in European menageries.

Although of recent years this species has been universally cited as *C. callitrichus*, I can find no valid reason for setting aside the conclusion of earlier authors that *sabæus* is its earliest specific title. Even if it be established that Linnæus confused more than one species under that name, one of those species was certainly the Monkey that was subsequently described as *C. callitrichus*. Hence Schreber and Erxleben, who followed Linnæus, were acting within their rights in assigning the name *sabæus* to that species.

Even if *sabæus* be rejected, the well-known name *callitrichus* cannot, in my opinion, be retained, because it is antedated by *werneri*, which, judging from Geoffroy's figure and description of the type, was given to a redder form at most only subspecifically distinct from the type of *C. callitrichus*.

CERCOPITHECUS ÆTHIOPS Linn.

Subsp. ÆTHIOPS Linn. (Plate XLII. fig. 2. Text-fig. 188.)

Simia æthiops Linn. Syst. Nat. ed. 10. i. p. 28, 1758; de Winton, in Anderson's Zool. Egypt, Mamm. p. 15, 1902.

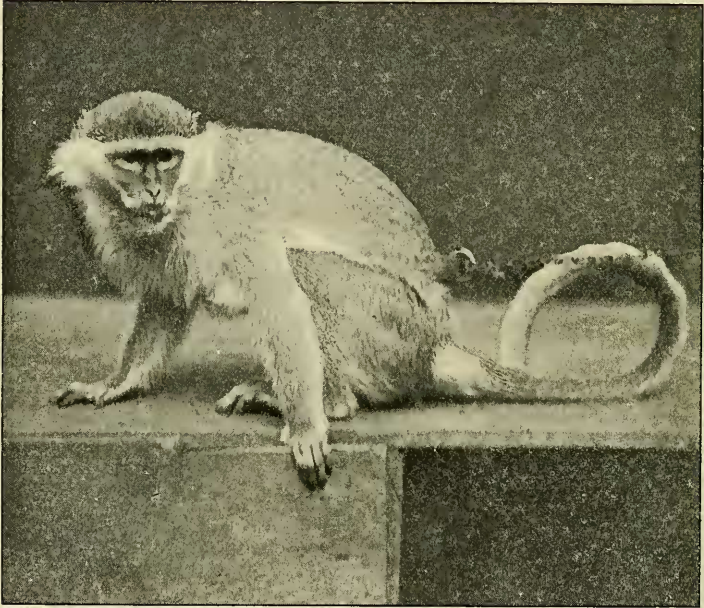
Cercopithecus griseo-viridis Desm. Mamm. p. 61, 1820.

Le Grivet, F. Cuvier, Hist. Nat. Mamm. i. pl. vii., 1819.

Simia subviridis F. Cuv. Dict. Sci. Nat. 1821, p. 17.

Cercopithecus griseus F. Cuv. Hist. Nat. Mamm., Tabl. Gén. et Méthod. p. 1. 1824.

Text-fig. 188.



Cercopithecus æthiops æthiops Linn.

(From a young specimen from Khartoum living in the Society's Gardens.)

Cercopithecus sabæus Is. Geoffr. St. H., C.R. Acad. Sci. xxi. p. 874, 1850; id. Cat. Méthod. Mamm., Primates, p. 22, 1851 (*nec* Linn.).

Face black with some short silvery-white hairs invading the upper and lower lips from the cheeks and chin. Whisker-hairs on cheeks wholly white, very long, growing upwards and backwards over the ears. A distinct white brow-band passing

laterally into the white of the cheeks. The top of the head and the cheeks strongly contrasted from each other in colour. The head, neck, upper parts of the body, and outside of the limbs speckled greyish yellow and black, the general effect of the combination of speckling being greyish green; the outside of the limbs greyer than the body and head; the hands and feet also grey or becoming gradually and lightly infuscate. Tail greyish speckled above, white beneath throughout, sometimes (? always when the tail is complete) with longer white hairs at the end; at the base on each side a tuft of white hairs and white beneath at the root. The whole of the under side of the body and the inside of the limbs white; no red or yellow hairs on the pubic or anal areas.

Loc. Upper Nile: Abyssinia, Senaar, Kordofan.

During recent years the name *athlops* Linn. has by almost common consent been applied to one of the species of *Cercocebus*. I can find no reason, however, for doubting the correctness of Mr. de Winton's verdict that it was given in the first instance to the species of *Cercopithecus* of the Upper Nile which is usually cited as *sabeus* or *griseo-iridis*.

At the present time there are living in the Gardens three subadult examples that I regard as typical *C. athlops*, one from Khartoum and two from the White Nile. Apparently referable to the same form are three examples in the British Museum, namely, one from Senaar (*Parreyes coll.*, 46.6.15.53), one from Renk in the Sudan (*R. M. Hawker*, 1.8.8.1), and one from Metola Shoa, 11,000 ft. alt. (*W. N. Macmillan*, 6.11.1.3). In the last the head and body measure 510 mm. and the tail 600 mm. I do not know whether examples of the typical subspecies ever have any red colouring in the hair at the base of the tail below.

Subsp. *ELLENBECKI* Neumann.

Cercopithecus ellenbecki Neumann, SB. Ges. nat. Fr. Berlin, no. 3, p. 50, 1902.

Intermediate between *C. a. hilgerti* and *C. a. athlops* from the White Nile. Most like the latter, but the upper side deeper olive-yellow. Feet and hands somewhat darker. Under side of tail clear grey, only the extreme tip white.

Loc. Zuai Lake (Suksuk and Maki Rivers).

Two examples in the British Museum perhaps belong to this local race. One is a specimen identified by Gray* as *C. engy-thittia* Herm., and the other belonged to the East India Company and is labelled "Ashkowa (44.9.30.15)." Both are much greener in colour than those mentioned above, which came from Renk and Senaar. It is possible also that the two specimens in the

* *Chlorocebus engy-thittia* Hermann, Gray, Cat. Monkeys Brit. Mus. p. 26, 1870.

collection of the Society, mentioned below under the name *C. aethiops hilgerti*, should be referred here.

Subsp. *HILGERTI* Neumann.

Cercopithecus hilgerti Neumann, SB. Ges. nat. Fr. Berlin, no. 3, p. 50, 1902.

Reddish olive. Fore limb grey; hind limb grey from knee; hands and feet blackish, but the black not sharply defined from the grey. Tail blackish grey mixed with olive above, grey beneath, with white tip. Whisker-hairs long, white; face black with narrow frontal band. Upper side of head mixed with black; a rusty-red spot at base of tail below. White below and on inner side of arms.

Loc. Webbi Schebeli (Gallaland).

In the young there is no rusty spot at root of tail and the feet and hands are grey.

In the collection of the Society there is the skin of an adult male specimen ticketed "N.E. Africa, 17.6.71 to 14.10.75," which in most points agrees very well with the description of *C. hilgerti*, except that the upper side is thickly speckled black and yellow without any tinge of red. As in typical *C. aethiops*, there is a conspicuous white tuft at the root of the tail on each side and the upper and lower lips are clothed with many short white hairs, features which are not mentioned by Neumann; and a young example now living in the Gardens, received from Mrs. W. N. MacMillan from Southern Abyssinia, belongs apparently to the same subspecies. There is no red at the root of the tail, however. This may perhaps be due to the immaturity of the specimen.

CERCOPITHECUS MATSCHIEI Neumann.

Cercopithecus matschiei Neumann, P. Z. S. 1902, ii. p. 143; id. SB. Ges. nat. Fr. Berlin, no. 3, p. 51, 1902.

Colour chestnut-red, mixed with black. Limbs pale olive-yellow, grey beneath; hands and feet blackish. Tail olive-yellow mixed with black, pale beneath, with greyish-white tip. Whisker-hairs long and white. Under side white; a rusty-red spot on the base of the tail.

Loc. Omo and Sobat Rivers.

This form would be regarded by myself, I suspect, as a subspecies of *C. aethiops*. It certainly differs, however, from that species, as well as from all the species of the group known to me, in its chestnut-red coloration.

CERCOPITHECUS DJAMDJAMENSIS Neumann.

Cercopithecus djamdjamensis Neumann, P. Z. S. 1902, ii. p. 143; id. SB. Ges. nat. Fr. Berlin, no. 3, p. 51, 1902.

Colour as in *C. matschiei*, but paler and yellower red; hind

leg from the knee ash-grey. Under side silver-grey. Tail blackish grey, tinged with olive above at the base, black distally; paler beneath. Whisker-hairs short. Coat thick, forming a kind of mane on the shoulders and fringes on the belly and hind legs. Tail extremely short, much shorter than the head and body (55:90).

Loc. Mountains east of Abaje Lake (10,000–12,000 ft.).

This mountain form differs, as Neumann points out, from all other species of *Cercopithecus* of this group in the extreme shortness of the tail. Unfortunately the description of other characters is too brief to supply information as to the affinities of the species.

CERCOPITHECUS TANTALUS Ogilby.

Subsp. *TANTALUS* Ogilby. (Text-fig. 189, p. 732.)

Cercopithecus tantalus Ogilby, P. Z. S. 1841, p. 33; Matschie, SB. Ges. nat. Fr. Berlin, 1893, p. 216.

? *Cercopithecus chrysurus* Blyth, J. A. S. Bengal, xiii. p. 477, 1844.

? *Cercopithecus sabæus* Reichenbach, Affen, p. 114, 1863 (in part.).

? *Cercopithecus callitrichus* Forbes, in Allen's Nat. Libr., Monkeys, ii. p. 62, 1894 (at least in part).

? *Cercopithecus sabæus* Ponsargues. Ann. Sci. Nat. (8) iii. p. 224, 1896.

Face as black as in *C. sabæus* and *C. pygerythrus*; no white hairs on upper lip and chin. Whiskers long, growing upwards and backwards and concealing or partially concealing the ears, the summit of the whiskers yellow, the ends of the uppermost hairs lightly infuscated and speckled. A distinct white brow-band, marked off from the whiskers laterally both by colour and by a narrow black streak extending backwards behind the corner of the eye. Whiskers sharply defined by their colour from the top of the head. Colour of head, dorsal surface, and of limbs very much the same as in *C. cynosurus*. Tail longer than head and body, becoming paler at its posterior end, where in the adult it is as yellow as in *C. sabæus*; a tuft of usually white hairs on each side at its base; no red hairs beneath at the base. Hairs round the callosities also white; but beneath them in adult and immature examples of both sexes there is a patch of orange or rusty-yellow hairs. Scrotum in male slate-blue; prepuce scarlet.

♂. Head and body 500 mm., tail (imperfect) 750 mm.

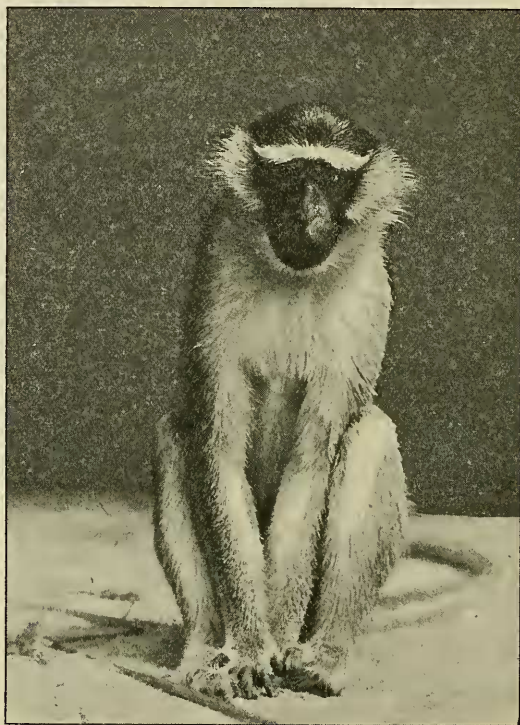
Loc. Nigeria (Lakoja, Dahomey, Upper Benué River) up to Lake Chad.

A large number of specimens of this species have been exhibited in the Society's Gardens. For most of these, as for Ogilby's unknown type, no locality was recorded. Recently, however,

specimens have been sent to the Society from the above-mentioned places.

Although *C. tantalus* has never, I believe, been previously identified with certainty, I do not think there is any reason to doubt the correctness of my determination. At all events the description of *C. tantalus* applies more closely to the form to which I have given the name than to any other known to me;

Text-fig. 189.



Cercopithecus tantalus tantalus Ogilby.

(From a specimen living in the Society's Gardens.)

and I find it impossible to believe that so common a Monkey in menageries has escaped naming down to the present time. For many years there has been a stuffed example in the British Museum labelled "*C. callitrichus*"; and it was probably this specimen that caused Dr. Forbes to describe *C. callitrichus* (= *sabæus*) as having a white brow-band. *C. tantalus*, as here identified, may be at once distinguished from *C. sabæus* by the

direction of growth of the whiskers as well as by the frontal band. The tuft at the root of the tail and the sharp differentiation in colour of the whiskers from the crown of the head point to affinity with *C. aethiops*; but the absence of white hairs on the lips, the yellower whiskers, the yellow end of the tail, and the rusty pubic patch separate *C. tantalus* from that species. The alleged blackness of the face and the presence of orange-yellow hairs round the scrotum in the examples, identified as *C. sabæus* by Pousargues, from the Grande Brousse and the Kemo Rivers in the French Congo, suggest the possibility of these Monkeys belonging to *C. tantalus* rather than to *C. sabæus*. And I think there cannot be much doubt that certain Nigerian Monkeys referred to *C. sabæus* by Audebert and Reichenbach belonged to this species.

In the British Museum there is a specimen of this species ticketed Jebba (*G. F. Abadie*, 0.2.18.1), resembling that described above in almost every respect, except that it may be regarded as aged or decolorised. There is scarcely any trace of yellow in the whiskers, and the hairs of the dorsal area of the head and body are almost brownish yellow without the rich colouring characteristic of those in the Society's collection. I am disposed to attribute this difference to the fact that menagerie-kept examples are protected from those influences of weather to which wild animals are subjected. I have noticed similar differences between menagerie and wild-caught specimens of other species of this genus. It is, in my opinion, not improbable that *C. aethiops* and *C. tantalus*, as here recognised, will be found to intergrade. Up to the present time, however, I have not seen any specimen that could not with certainty be assigned either to one or the other of these forms.

Subsp. BUDGETTI, nov.

Differing from the typical Nigerian form in having the long whisker-hairs much more decidedly speckled and annulated, some black hairs on the hands and feet near the base of the fingers and toes, and the hairs below the knee and elbow on the inner side of the limbs distinctly speckled. There is a very large patch of almost fiery-red hairs on the pubic area.

Loc. Uganda: Bathyaba, on the east shore of Lake Albert (*J. S. Budgett*, no. 3.2.12.1 in B.M.).

The extension of *C. tantalus* into Western Uganda is a fact of some interest. *C. tantalus budgetti* differs from *C. pygerythrus centralis* Neum., its most nearly related geographical ally, in the pale colour of the hands, feet, and extremity of the tail, its darker, less green dorsal colouring, its dirtier yellow and longer whiskers, the presence of a black streak behind the corner of the orbit, limiting the brow-band, the speckling of the under side of the limbs distally, and in the size and brilliance of the rufous patch of pubic hairs.

CERCOPITHECUS CYNOSURUS Scop. (Plate XLII. fig. 3.
Text-fig. 190.)

Simia cynosurus Scopoli. Delic. Flor. Faun. Insubr. i. p. 44, pl. xix., 1786.

Le Malbrouck, F. Cuvier, Hist. Nat. Mamm. i. pl. ii., 1819 (named *C. cynosurus* on p. 1 of Tabl. Gén. et Méthod., 1824).

Cercopithecus cynosurus Desmarest. Mamm. p. 60, 1820, and apparently of most subsequent authors.

Cercopithecus tephrops Bennett, P. Z. S. 1833, p. 109.

Face usually, at all events, much less heavily pigmented than in other species of the group, being pallid, greyish, and to a

Text-fig. 190.



Cercopithecus cynosurus Scop.

(From a specimen living in the Society's Gardens.)

varying degree patched or clouded with black, darker on the nose than laterally, and with many short white hairs on the upper and lower lips and chin. Whiskers short, growing upwards but not concealing the ears, speckled down to the level of the edge of the ear, and much the same tint as the top of the head, those on the lower half of the cheek white. A white brow-band; but neither the brow-band nor the top of the head sharply differentiated from the cheeks in colour. The head and body uniformly speckled yellow and black, the tint of the yellow sometimes rich, sometimes dull and greyish. Limbs externally below the shoulder and hip becoming gradually greyer: upper surface of hands, fingers, feet, and toes grey. Tail longer than head and body; scarcely

yellow, even at the base, speckled grey and black, the black predominating; no lateral tuft of hair at its base, and no red hair at its base beneath; grey throughout on the under side. Under side and inside of limbs greyish white, the middle line of the belly sometimes tinged with yellow; hairs round scrotum in male and on pubic area in female yellowish grey. No coloured hair round the callosities, which are pink. Scrotum in male slate-blue, as in *C. æthiops* and *C. tantalus*.

Loc. W. Africa: south of the Congo, Brazzaville (*Pousargues*).

Numerous examples of this species have from time to time been exhibited in the Society's Gardens, but in no case has the exact locality been known. The above-given description has been taken from the skins of an adult male and female. Pousargues says the hair round the scrotum and vulva is of the same colour as that of the belly. This, however, is not the case in the skins of two males and two females that I have examined. He also says that the hairs on the face are black. This also is not so in those that I have seen. It can hardly be claimed as definitely established that the species here described as *C. cynosurus* is the same as the one to which Scopoli gave that name. Tradition, however, seems to have fixed the name *cynosurus* on to the present species, and there appear to be no valid reasons for setting aside the identification.

CERCOPITHECUS PYGERYTHRUS Cuvier.

Subsp. PYGERYTHRUS Cuv. (Plate XLII. fig. 4. Text-fig. 191, p. 736.)

Cercopithecus pygerythra F. Cuv. Hist. Nat. Mamm. iii. pl. 24, 1821.

Cercopithecus pygerithræus Desmarest, Mamm. pt. 2, Suppl. p. 534, 1822.

Cercopithecus pygerythrus Lesson, Is. Geoffr. St. H., and of subsequent authors.

Simia erythropyga Cuvier, Règn. Anim. nouv. ed. p. 92, 1829; Fischer, Syn. Mamm., Addenda, p. 336, 1830.

Cercopithecus pusillus Desmoulins, Dict. Class. vii. p. 568, 1825.

Cercopithecus lalandii Is. Geoffr. St. H. Dict. d'Hist. Nat. iii. p. 305, 1843.

Face black, clothed with black hairs; a very distinct white brow-band continuous laterally with the white hair clothing the anterior portion of the cheeks, so that the face usually appears to be encircled with a continuous ring of white. Whiskers long, more or less concealing the ears, the ends of the hairs greyish and speckled with black, so that there is no sharp line of demarcation in colour between the whiskers and the top of the head. Head,

neck, body, and outer surface of arms and legs greyish, speckled uniformly black and washed-out yellow, sometimes with a pale wash of yellow, the limbs greyer than the body; the hands and the feet in the adult black, blackish, or at all events darker grey than the arms and legs, the hands darker than the feet. Hairs on the back of the thighs up to the callosities whitish, those round scrotum in male and on pubic area in female white (perhaps not

Text-fig. 191.

*Cercopithecus pygerythrus* Cuvier.

(From a specimen living in the Society's Gardens.)

always true, at all events of the female). Tail coloured like the back, but greyer, its distal end black, a very conspicuous patch of rusty-brown red at its base beneath and above the callosities. Scrotum turquoise-blue; prepuce scarlet.

Loc. S. Africa.

The types of *C. pygerythrus*, *C. pusillus*, and *C. lalandii* were recorded from the Cape. Hence these names may be regarded as synonyms. The British Museum has a series of these Monkeys

belonging to the Rudd Collection, and shot by Mr. Claud Grant:—

♀.	Head and body	403 mm.,	tail	614 mm.	Umfolosi, Zululand.		
♂.	"	"	309	"	457	"	"
♂.	"	"	462	"	—	"	"
	"	"	430	"	598	"	"
	"	"	453	"	592	Legogot, Barberton.	
♂.	"	"	465	"	699	Hlavisa, Zululand.	
	"	"	446	"	559	Knysna, C. Colony.	
	"	"	480	"	471*	"	"

The above-given measurements were taken in the flesh.

Cercopithecus pygerythrus with its subspecies, as here recognised, ranges from Uganda to Cape Colony. Broadly speaking, East-African examples differ from South-African examples in being yellower in colour and in the marked evanescence of the black speckles from the hair on the sides of the body, which are thus more uniformly tinted yellow, sometimes with a tinge of red. South-African examples are, as a rule at all events, more uniformly speckled all over and much greyer in colour. I have selected for description as subspecies some examples in the British Museum which seem to represent distinguishable local races.

Subsp. *RUFVIRIDIS* Is. Geoffr.

Cercopithecus rufoviridis Is. Geoffr. St. H., C.R. Acad. Sci. xv. p. 1038, 1842; id. Dict. d'Hist. Nat. iii. p. 307, 1843; id. Arch. Mus. ii., 1843.

Cercopithecus flavidus Peters, Reise Mossamb., Säug., p. 265, pl. i. b, 1852; Matschie, SB. Ges. nat. Fr. Berlin, 1893, p. 213.

To this subspecies I refer a young male specimen in the British Museum from Angoniland, Brit. Centr. Africa (*Sir A. Sharpe*, 0.11.19.1). The coat is long and yellowish green, speckled with black on the head and dorsal area of the body. The sides of the body are strongly tinged with pale rusty red, a tint which is strongly in evidence when the hair is parted to show the under-fur. The whiskers are short, greyish ticked with black. The end of the tail is black, but the hands and the feet are scarcely darker than the rest of the limbs. This is possibly due to the immaturity of the specimen. The hairs round the scrotum are red.

The red tinge of the hairs on the sides of the body and round the scrotum distinguish this form from the typical S.-African *C. p. pygerythrus*.

The exact locality of the type of *C. rufoviridis* was unknown, but since Matschie declares that this Monkey was redescribed as *C. flavidus* by Peters, I regard the Mozambique form as typical of *C. p. rufoviridis*.

* Query error for 571 ?

Subsp. *WHYTEI*.

Upperside greenish ticked with black, very much the same colour as in *C. pygerythrus centralis*, but differing from that form in the colour of the under-fur, which, instead of being sooty, is of a pinkish grey, in the greater length of the coat, especially over the shoulders, and in the length and colour of the whiskers, which are long, completely concealing the ears, and very conspicuously banded.

Loc. Mt. Chiradgula, Nyasaland (*A. Whyte*, 95.12.7.7).

A single specimen in the British Museum.

Subsp. *JOHNSTONI*, nov.

Face jet-black; a distinct greyish-white or tawny-white brow-band, broadly continuous at the sides with the paler hair on the cheek, which it resembles in colour. Long cheek-hairs in front of and overlying the ears banded and gradually passing in tint dorsally into those of the upper side of the head. Coat long; general colour of the dorsal surface a washed-out tawny grey, not so distinctly speckled as in most other forms, and without any marked greenish-yellow tint, the predominance of the tawny hue and indistinctness of the speckled appearance being due to the relatively great length of the distal pale band on the individual hairs, which on the fore part of the body considerably exceeds that of the black areas adjacent to it (in a hair of 60 mm. in length, taken from the shoulders, this band measures 13, the proximal black area being 10, and the terminal 8). On the posterior portion of the body the areas are more equal in length, but laterally where the dark speckling dies away the predominance of the pale bands is still more marked. Arms greyer than body; hands and wrists black above and rather sharply defined from the forearm. Legs also greyer than body, thighs sometimes washed with yellow; feet blackish, but not so black as hands. Under side dirty white. Tail greyish above, scarcely washed with yellow, becoming quite black at the tip, under side with a large rusty-red basal patch, the rest greyish or greyish rufous to the tip. Some greyish-rufous hairs on the pubic area.

Measurements of dried skin:—Head and body about 430 mm., tail about 600.

Loc. Moshi: south side of Kilima Njaro, 5000 ft. alt. (*Sir H. Johnston*).

Two specimens in British Museum. Reg. nos. 85.1.17.1 and 85.1.17.2 (*type*). There is also a young female specimen in the collection of the Society which was received 17.9.91, and died in the Gardens 24.11.92. This specimen, ticketed "Kilima Njaro," is much richer and more yellowish green in colour than those collected by Sir H. H. Johnston, which is possibly due to want of exposure to rain and sun. The coat, however, is thick

and long, and the hairs show the same predominance of the pale band. There is also an example in the British Museum labelled Fort Hill, Mt. Kenia (*S. L. Hinde*, Reg. no. 2.7.6.1), representing the same or a closely allied form.

Subsp. *CENTRALIS* Neumann.

Cercopithecus centralis Neumann, Zool. Jahrb. Syst. xiii. p. 533, 1900.

General colour fairly uniformly greenish, speckled with black. Whisker-hairs short, not concealing ears, the ends of the long hairs indistinctly banded. Tail grey, yellowish at root above; black at end. The rusty-red hair on the root of the tail and above the callosities small in quantity (perhaps owing to immaturity of specimens). Forearm below elbow and hind leg below knee ashy grey, speckled; wrist and hand black; ankle grey, foot blackish. Under-fur sooty grey on back, pale grey at sides. In the male the hairs round the scrotum, and in the female those on the pubic area, are tinged with red as in *C. tantalus* (this would probably increase in quantity with age).

♂. Head and body 530 mm., tail 445 mm.
 ♀. " " 614 " 525 "

Loc. Dakota and Ssesse Island (*Neumann*).

The above-given description is taken from two examples in the British Museum, from Barumba, in Ankole, 5000 ft., collected by the late Mr. W. Doggett. Mr. Thomas tells me they were identified by Dr. Neumann, whose original description of this Monkey is too brief to be of any value.

In the British Museum there is the skin of a specimen from the Juba River, S. Somaliland, which only differs in minor points from the specimens above referred to *C. p. centralis*. Neumann also records, but refrains from naming, examples also from the Juba River, setting them aside as allied to *C. rufoviridis*.

CERCOPITHECUS NIGROVIRIDIS, sp. n. (Plate XLII. fig. 5.)

Skin of face black, pale on the cheek; hairs on upper lip and adjacent to face black. A very narrow black superciliary band, also a narrow black stripe continued laterally from the corner of the eye towards the ear. Hairs on cheeks directed straight backwards, blackish grey near the face, and with an obscure golden subapical band towards the ear, where they are of much the same tint as those on the summit of the head. Hair on summit of head, neck, back, shoulders, and sides of body black with two narrow rich golden-yellow bands, which are much narrower than the black area between them or than the apical area. Hence the black is

the dominant colour. Frequently, however, the proximal of the two yellow bands is not, or scarcely, differentiated from the greyish-brown colour of the basal portion of the hair. Arms externally much like the back, but the yellow is paler and less rich; hands blackish above. Legs externally yellower than the back, owing to the greater width of the yellow band; foot and ankle less yellow than thigh. Chin, throat, sides of neck, chest, belly, and inside of limbs greyish or yellowish white. On a level with the shoulders the dark hairs encroach on each side across the chest, partially separating the pale hue of the throat from that of the chest and belly. Tail almost the same colour as the back above, but darker, especially distally; yellower on the under side, quite yellow at base. Pubic area below the callosities rusty red.

Length of body and head 290 mm., tail defective.

Loc. Upper Congo.

The type of this species is the skin of a female specimen that lived in the Society's Gardens from Nov. 29th, 1892 to May 15th, 1894. It is ticketed "Congo." Subsequently, however, there was a specimen living in the Gardens, belonging to the Hon. Walter Rothschild, which was brought by Mr. J. D. Hamlyn from Brazzaville (Stanley Pool), 700 miles up the Congo, in Belgian territory. Mr. Hamlyn tells me it was brought with other Monkeys to Brazzaville from further inland. Hence we are still ignorant of the exact locality of the species.

This species, which has remarkably soft and silky hair, is about the size of *C. talapoin*. In this particular, as well as in the colour of the cheek-hairs, it differs from the rest of the *Æthiops*-group. The direction of the hair on the cheeks at once differentiates it from *C. talapoin*.

THE TALAPOIN-GROUP.

Miopithecus Is. Geoffr. St. H.

In addition to the characters for this group mentioned in the analytical key (p. 681), it may be mentioned that the single known species is the smallest of the members of this group of Monkeys. It is frequently the case in Mammalia that a species composed of small individuals presents characters which are met with in the young of allied species composed of larger individuals. The adult *Hippopotamus liberiensis*, for example, resembles in many features the young of its larger ally *H. amphibius*. So, too, with *C. talapoin*. The small face and large cranium of the adult recall those of the young of other species of this genus, so much so that any one acquainted with the aspect of full-grown specimens of other species would suppose upon a cursory examination that an adult *C. talapoin* was an immature animal.

CERCOPITHECUS TALAPOIN Schreber.

Subsp. TALAPOIN Schreb. (Plate XLII. fig. 6.)

Simia talapoin Schreber, Säug. i. pl. xvii., 1774.

Cercopithecus talapoin Erxl. Syst. Regni Anim. p. 36, 1777; and of recent authors.

Miopithecus talapoin Is. Geoffr. St. H., C.R. Acad. Sci. xv. p. 720, 1842; id. Dict. Hist. Nat. iii. p. 309, 1845.

Simia melarhina F. Cuv. Règn. Anim. nouv. ed. p. 92, 1829.

Skin of face pallid; nose, upper and lower lips clothed with black hair; no superciliary pale band on head. Hairs on cheeks mostly golden yellow, many of them apically infusate; a black streak running backwards from the corner of the eye halfway towards the ear; the hairs on the anterior half of the area between the eye and ear directed backwards, those on the posterior half radiating from a point near the middle of the ear upwards, forwards, and downwards, forming a well-defined semicircular tract. Hair on lower portion of cheek longish, and directed straight backwards. Ears flesh-coloured or black, with some blackish hairs or black and yellow hairs on them. Summit of head, nape of neck, and back uniform dark olive-yellow, the hairs greyish on the basal two-thirds, black distally and marked with one golden-yellow band, which is narrower than the black terminal portion: hence black preponderates on these areas. On the shoulder and hips the yellow begins to increase in extent at the expense of the black. This is still more emphasized on the arms and legs, which are externally golden yellow; hands and feet also golden yellow above. Chin, throat, chest, belly, and inside of limbs greyish white, the limbs becoming yellower distally. Tail with its dorsal surface the same colour as the back, becoming blacker distally; lower surface golden yellow at base, then greyer, and becoming blackish distally. Hairs round anus and on pubic and scrotal regions and back of thighs golden yellow.

Measurements:—

♀. Head and body 340 mm., tail 380 mm.

♂. " " 350 " " 375 "

Loc. Cameroons and Congo.

The above-given description is taken from two specimens in the British Museum collected by Mr. G. L. Bates. The male was taken 30 miles from the mouth of the Benito River, at an altitude of 200-300 feet; the female from the Como River, 70 miles from the Gaboon, where it was caught in a swamp almost on the sea-level.

The female is decidedly less richly coloured than the male.

Subsp. *ANSORGEI*, nov.

Larger than the form from the Benito River which I select as typical for the species, and further differing in having much less black upon the cheeks, the forwardly directed hairs in front of the ear for the most part white instead of yellow and black, and the hairs on the cheek adjacent to the face yellow with slightly darkened tips, instead of yellow with pronounced infuscation of the distal end. The whole dorsal area paler and greener, owing to the fact that the yellow area on the hairs is much longer, practically equalling, in fact, the black terminal portion, instead of being only about half its length as in *C. talapoin talapoin*. The ventral area a clean instead of a dirty white.

Head and body? (wrongly labelled 900 mm., which is probably a misprint for 400), tail 525 mm.

Loc. Cambaca, in Angola (*Dr. W. J. Ansorge*, no. 4.4.9.1 in B.M. register).

A single typical specimen.

I do not know whether the species described by Geoffroy as *Miopithecus capillatus* (C.R. Acad. Sci. xv. p. 720, 1842; Dict. Hist. Nat. iii. p. 309, 1845) is related to *C. talapoin* or not. The description indicates a distinct species at all events. The locality was unknown.

THE PATAS-GROUP.

Erythrocebus Trouess.

Large Monkeys, differing from the members of the foregoing groups in standing high upon their long slender limbs, in the pallid whitish hue of the skin of the face and ears, and in the preponderance of red in the hairs of the body and head and of white on the lower limbs.

Distr. Sierra Leone to the Upper Nile.

CERCOPITHECUS PATAS Schreber.

Subsp. *PATAS* Schreb. (Plate XLI. fig. 6. Text-fig. 192, p. 743.)

Simia patas Schreber, Säug. i. p. 98, pl. xvi., 1774.

Cercopithecus patas Erxl. Syst. Regni Anim. p. 34, 1777, and of most recent authors.

Simia rubra Gmelin, Syst. Nat. i. p. 34, 1788.

Cercopithecus ruber Geoffr. Ann. Mus. xix. p. 96, 1812, and of many authors.

Hair on nose black and extending upwards to join the black superciliary band, which generally has a few white hairs and which extends laterally to the ears with a slight dorsal angulation above the temple; hairs on lips and chin white in adult. Whiskers directed downwards and backwards; black close to the face, mostly greyish white, but becoming gradually yellower and annulated with black

beneath the ear. Hair on summit of head short and rich coppery or orange-red in front, becoming speckled posteriorly, the coppery-red patch gradually blending with the hair of the rest of the head. On the occiput, nape, shoulders, and anterior portion of the back the hairs are red to the base, with the tip black and a pale yellowish subapical annulus. On the lumbar and sacral regions and above the root of the tail and on the upper portion of the thighs the hairs are uniformly red. On the shoulders the hairs

Text-fig. 192.

*Cercopithecus patas patas* Schreber.

(From specimens living in the Society's Gardens.)

are long and blackish, with a broad pale subapical annulus, giving an iron-grey appearance to this area. On the sides of the neck the hairs are washed with yellow; on the sides of the body they are longer than on the back and redder. Tail dark rich red above, greyish or yellowish below, and paler apically. Chin, chest, belly, inner side of limbs and outer side up to shoulders, and ischial callosities white or greyish white.

Young. In young examples referred by me to this species the hairs clothing the upper and lower lips are black and not white as in the adult; and the outer sides of the legs and arms are pale yellowish red. I have very strong reasons for suspecting, although no actual proof of the fact is supplied by observation of the process in an individual, that the hairs of the lips turn from black to white and those of the appendages from yellowish to white during growth.

Text-fig. 193.



Cercopithecus patas pyrrhonotus Hempr. & Ehrenb.

(From a specimen from Uganda in the Society's Gardens.)

Subsp. PYRRHONOTUS Hempr. & Ehrenb. (Text-fig. 193.)

I also suspect that the nose of the white-nosed eastern form of this species, for which the oldest name appears to be *pyrrhonotus*, is black in the young. The Society possesses skins that I refer to this form, at all events provisionally, from Uganda (*C. R. Hall*) and Gondokoro (*Col. Bruce*). They may be dis-

tinguished from the West-African specimens I have seen by the following characters:—

- a.* Nose black in adult, some black hairs adjacent to the face on the cheeks; red patch on the crown of the head not very sharply defined; shoulders iron-grey Subsp. *patas*.
a'. Nose white in the adult; hairs on cheeks adjacent to face also white; red patch on crown of head sharply differentiated and bordered antero-laterally by a short black band extending upwards from the superciliary band above the external angle of the eye; shoulders less noticeably iron-grey Subsp. *pyrrhonotus*.

Although the Society almost always has examples of this species on exhibition, and there are a number of skins of old and young individuals in the collection, they are mostly labelled merely W. Africa. The British Museum possesses practically no material. Hence lack of properly localised skins makes it impossible for me to contribute anything to our knowledge of the geographical races of the species.

Broadly speaking, *C. patas* with its subspecies is distributed from Senegambia across N. Africa to the Upper Nile. It is, I believe, an open country and not a forest form.

For further information regarding this species and its local forms, reference may be made to the recent paper by Dr. Matschie which is cited in the appended list of names:—

- patas* (= *ruber*). References as above. Senegal.
rufa Schreber, Säug. Suppl. pl. xvi. B, 1801. Loc. ?
circumcinctus Reichenbach, Affen, p. 123, 1863. Loc. ?
 Probably W. Africa.
sannio Thomas, Ann. Mag. Nat. Hist. (7) xvii. p. 173, Feb. 1906. Go, Lake Chad.
zechi Matschie, SB. Ges. nat. Fr. Berlin, 1905, pt. 10, p. 274. Togoland.
kerstingi, id. loc. cit. Sokode and Fasan (Nigeria).
langheldi, id. op. cit. p. 275. Upper Benue, Cameroons.
pyrrhonotus Hempr. & Ehrenb. Verh. Ges. nat. Fr. Berlin, i. p. 407, 1829; iid. Symb. Phys. pl. x. Le Nisnas, F. Cav. Hist. Nat. Mamm. i. pl. 27, 1830. Kordofan.
poliophæus Reich. Affen, p. 122, 1863 (= *poliophus* Heuglin, Reise Nord-Afr. ii. p. 5, 1877). Fazoglo, Darfur.
baumstarki Matschie, op. cit. p. 273. Ikoma.

Dr. Matschie regards all these forms, with exception of *C. p. sannio*, as species of the genus *Erythrocebus*.

EXPLANATION OF THE PLATES.

PLATE XXXIX.

- Fig. 1. Head of *Cercopithecus leucampyx nigrigenis*, subsp. nov. (p. 692). From the skin of type specimen.
 2. Head of *C. leucampyx stuhlmanni* Matschie (p. 690). From the type specimen of *C. otoleucus* Scl., now living in the Society's Gardens.
 3. Head of *C. kolbi hindei*, subsp. nov. (p. 703.) From the skin of the type specimen.
 4. Head of specimen identified as *C. albogularis albotorquatus* Pous. (p. 702) in the collection of the Society.
 5. Head of *C. martini* Waterh. (p. 698). From a skin in the collection of the Society.

PLATE XL.

- Fig. 1. Head of *C. campbelli* Waterh. (p. 710). From a skin in the collection of the Society.
2. Head of *C. lurnetti* Gray (p. 710). Ditto.
 3. Head of *C. signatus* Jent. (p. 721). Ditto.
 4. Head of *C. ascanius schmidtii* Matschie (p. 720). From a skin, not quite typical, in the collection of the Society.
 5. Head of *C. ascanius ascanius* Audeb. (p. 719). From a skin in the collection of the Society.
 6. Head of *C. petaurista buttikoferi* Jent. (p. 718). Ditto.

PLATE XLI.

- Fig. 1. Head of *C. diana* Linn. (p. 682). From a skin in the Society's collection.
2. Head of *C. rhoesti* Scl. (p. 714). From the type specimen ditto.
 3. Head of *C. cephus cephus* Linn. (p. 722). From a specimen now living in the Society's Gardens.
 4. Head of *C. erythrogaster* Gray (p. 715). Ditto.
 5. Head of *C. erythrotis* Waterh. (p. 725). From a skin in the Society's collection.
 6. Head of *C. patas patas* Schreber (p. 742). Ditto.

PLATE XLII.

- Fig. 1. Head of *C. sabæus* Linn. (p. 726). From specimen living in the Society's Gardens.
2. Head of *C. æthiops æthiops* Linn. (p. 728). Ditto.
 3. Head of *C. cynosurus* Scop. (p. 734). Ditto.
 4. Head of *C. pygerythrus pygerythrus* Cuv. (p. 735). Ditto.
 5. Head of *C. nigroviridis*, sp. n. (p. 739). From the skin of the type specimen.
 6. Head of *C. talapoin talapoin* Schreber (p. 741). From specimens now living in the Society's Gardens.
-